

THE BROOKINGS REVIEW

Spring 1983

Should Money Targets Be the Focus of Monetary Policy?

The genuine issues confronting the Federal Reserve are neither money versus interest rates nor monetarism versus Keynesianism.

Policy makers have no valid reason to emphasize interest rates instead of money, or money instead of interest rates.

A sensible approach requires the Fed to consider both—not in isolation, but in the context of current and prospective economic circumstances.—**Ralph C. Bryant**

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Second-class postage paid at Washington, D.C.
USPS I.D. No. 14209; Publication No. 551640; ISSN 0745-1253
Postmaster: Change-of-address cards (Form 3579) should be sent to
The Brookings Institution
1775 Massachusetts Avenue, N.W., Washington, D.C. 20036

THE BROOKINGS REVIEW

Spring 1983 Vol. 1, No. 3

Publisher Bruce K. MacLaury
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Circulation Ann Lofton
Director of Publications Roland Hoover

The Brookings Review is published quarterly by the Brookings Institution, 1775 Massachusetts Avenue, N.W., Washington, D.C. 20036. Second-class postage paid at Washington, D.C. Copyright © 1983 by The Brookings Institution. All rights reserved.

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Perspectives

The Crisis in the World Economy

Lawrence B. Krause

The world economy is at a critical juncture. Either a recovery will begin rather shortly—and I think this is most likely—or economic conditions could worsen very considerably during 1983.

The world crisis has two dimensions: an economic dimension that arises from the extended recession in industrial countries, and a financial dimension that comes from the overhang of external debts on Eastern European and developing countries. There are short-term and medium-term elements in both dimensions. A great deal more is at stake than just the economic suffering of millions of workers who have lost their jobs, although unemployment, bankruptcy, and economic dislocations are all very serious.

In addition, the world crisis is leading to political unrest and a weakening of institutions. Furthermore, cooperation among governments has been undermined. Without question, the gas pipeline dispute would have been much easier to resolve if the economic backdrop had been one of prosperity rather than prolonged recession.

Finally, serious challenges are now being raised in both developed and developing countries about the continuation of an open world economy.

During most of the postwar period, efforts have been made to open the world economy, and the economic growth and welfare of countries have been thereby enhanced. The term "interdependence" has become commonplace in describing the situation. The advantages were demonstrated by the advanced

countries and were subsequently emulated by several developing countries. Indeed, it was the adoption of outward-oriented policies that led several developing countries such as Brazil and South Korea into large external debts. The outward policies increased their exports and economic growth, which made them creditworthy and also raised the internal profit rate on invested capital, which encouraged them to borrow. The outward strategy yielded very rapid economic growth for these countries that adopted it; growth rates were much above those of advanced countries.

However, interdependence works in both directions: It spreads prosperity when the world economy is expanding and it spreads recessions when the world economy is contracting. The severity of the world recession was not foreseen by less-developed-country borrowers (and a few others as well), which is another major reason their external debts rose so sharply during the last two to three years and is the principle reason they have become so burdensome to service. Most observers expected the recession following the second oil price rise in 1979–80 to be much like the one following the first rise in 1973–74. Instead it has been much more severe because inflation was worse. Along with the long recession, interest rates have remained very high in real terms, international trade has contracted for two years (10 percent in 1982), and raw materials have fallen sharply (about 38 percent on average), in part as a result of the strong U.S. dollar.

In evaluating the consequences of current circumstances on the developing countries and their future prospects, it is useful to bring attention to the factors promoting their growth. Both internal and external factors are important.

Internally, the characteristics that seem to differentiate those developing countries that have made rapid strides in recent years from those that have not are a political commitment to promote growth, stability of institutions, market-oriented economic policy, and capability to adjust in product, labor, and capital markets. All of the large debtors among the developing countries score relatively well on these characteristics. The large debtors are also the promoters of growth, although instances of excessive borrowing did occur. This is not to suggest that there were not instances of excessive borrowing, but in the main foreign indebtedness was undertaken within a reasonable domestic setting. To say it another way, growth and debt go together.

The external factor that is most important in promoting growth in developing countries is expansion of the world economy. When industrial countries expand, the spillover to the developing countries through trade of goods and services and through private capital flows, including direct investment, is very great. If industrial countries grow at about a 4 percent rate or above, their growth of imports is at about twice that rate, or 8 percent or more. Since the share of the market supplied by developing countries has been rising, export volume of developing

countries would be expected to rise between 12 percent and 16 percent under these circumstances. Three years of growth at these rates would do wonders to solve the problems of the developing countries. However, if industrial countries grow by only 2.5 percent to 3 percent, their import growth is only directly proportional and thus exports by developing countries would be much less. Furthermore, if they have very little growth, say, less than 1 percent, their imports contract, with a devastating effect on developing country exports.

A second element relates to the prices that the developing countries receive for their exports. Here a distinction must be drawn between manufactured goods and raw materials. Approximately 20 percent of the exports from developing countries are manufactures, and these have been growing particularly fast. The prices for these exports rise in line with those of manufactures in advanced countries. In 1982 the prices measured in dollars declined by about 3 percent to 4 percent. With economic recovery and some depreciation of the dollar, they should rise about 6 percent a year. The prices of raw materials are much more volatile. They peaked in October-November 1980 and declined 38 percent until the end of 1982—about a 12 percent decline on average during 1982. With a world recovery, the prices of these goods should rise more sharply.

Thus if there is a long-lasting world economic upswing, the value of exports of developing countries could rise 20 percent to 30 percent per year—the higher figure for countries selling manufactured goods. A continuation of a stagnant world economy, however, would imply a further decline in the value of these countries' exports, possibly about 10 percent. So the difference between the debt problem becoming manageable and its becoming intolerable is recovery in the world economy.

Of course, the situation of the developing countries could be made worse if the advanced countries raise protectionist barriers against their

exports. Rapid growth of developing countries in some measure depends on a congenial world market.

Finally, international financial markets must provide adequate credit to permit the developing countries to finance their necessary balance of payments deficits. In normal times there is no problem because high real rates of return on capital in developing countries make this lending desirable and profitable for both borrowers and lenders. However, in the current economic crisis, the financial mechanism needs attention by governments to make sure it operates properly.

The IMF must be provided with adequate resources to continue lending.

The most likely world economic outlook is that recovery will begin in the United States very shortly and strengthen in the second half of 1982. Japan is likely to have a very weak year (by Japanese standards), but still manage to grow between 2 and 3 percent. In Europe, however, the recession may not have hit bottom yet and a recovery is not expected until the latter part of 1983 or 1984. So industrial country growth during 1983 might average about 2 percent, but might be getting stronger as the year progresses.

This means that the developing countries will continue to experience weak export demand until the second half of 1983. Finance is likely to continue to be a problem as new monies need to be borrowed and old debts repaid. However, the problem should ease by 1984.

Individual developing countries will progress at differing rates. Mexico, for instance, will benefit from the recovery in the United States and the competitive improvement

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which the devalued peso will give it. However, it will be hurt by some erosion of oil prices, but not seriously unless the price collapses.

The area with the best economic performance is again likely to be the Pacific basin. Countries there will gain from the U.S. recovery and the continued growth of Japan.

Latin American countries are likely to achieve some financial recovery in 1983, but not much growth of income. Many have heavy debts which must be attended to before rapid growth can return.

Given the risks in the world economy, it is proper to ask what can be done to help ensure an improvement and to try to make things better. Of all the things that the United States could do, the most important by far is a further reduction in short-term interest rates. This requires a reduction in the out-year budget deficits to permit the Federal Reserve to ease credit. While this should be done for domestic reasons, it also will help the world economy.

Second, the United States should encourage the continuation of lending to responsible borrowers among the developing countries. This can be effectuated by reasonable behavior by our bank examiners, by bilateral arrangements between our government and other governments, and through international institutions like the IMF. Thus the IMF must be provided with adequate resources to continue lending. In the medium term, some institutional changes are required in bank lending to developing countries to prevent a recurrence of today's problem, but these reforms are moderate ones and should not stand in the way of continued lending now.

Finally, the United States should do everything it can to maintain an open trading system. We should resist protectionist pressures at home and discourage them abroad. Over the next few years the developing countries should be integrated into the General Agreement on Tariffs and Trade system with both rights and responsibilities. We should be studying ways to bring that about. 

Money and Monetary Policy

Money targeting can lead policy astray. The debate about it often misses the important issues.

Ralph C. Bryant

IT IS WIDELY BELIEVED that the money stock of the United States, (the amount of money in circulation, somehow defined) should play a central role in the conduct of Federal Reserve monetary policy. In particular, it is believed that the Fed should publicly announce a target time path for the money stock and then try to make the stock follow that path closely. The analytical basis for this approach to monetary policy, however, is seriously deficient. Debate about this approach, furthermore, seldom focuses on the important, controversial issues about which views can justifiably differ; instead, it tends to become mired in confusion and spurious issues.

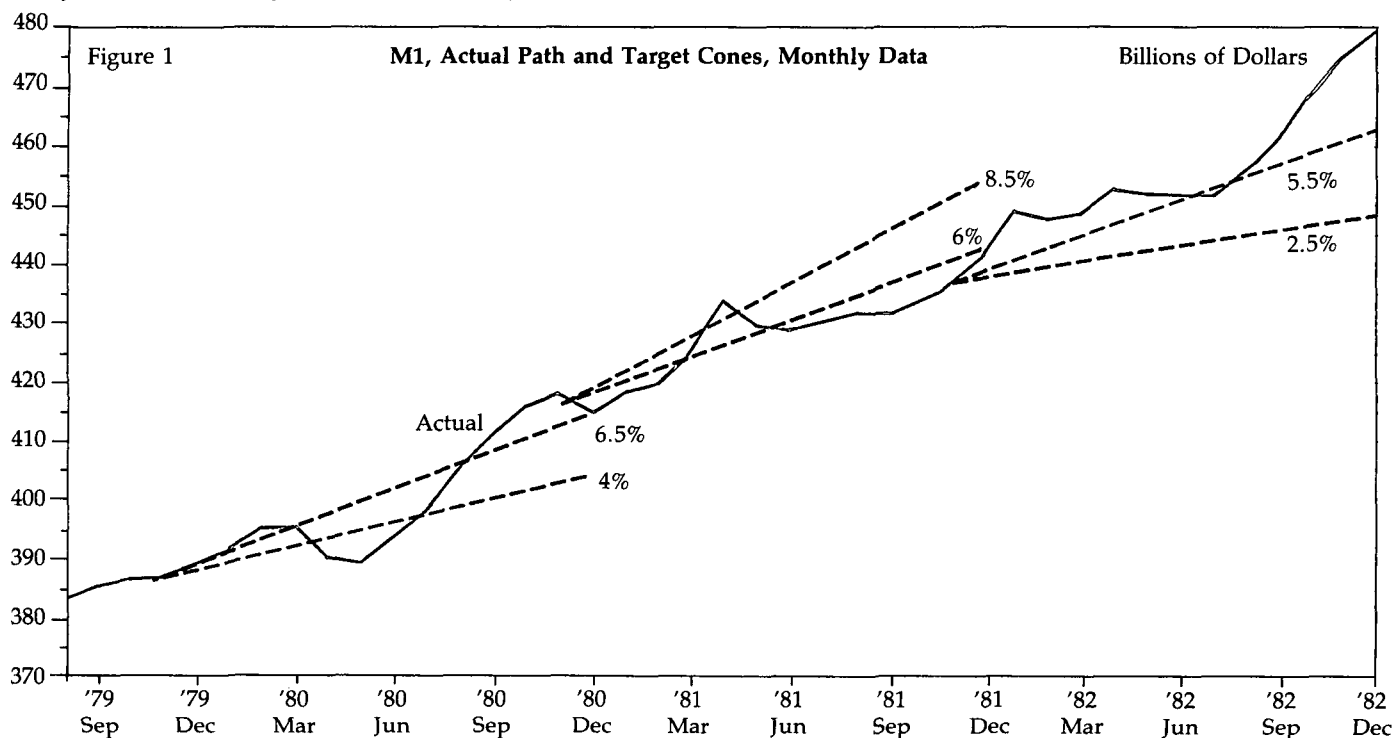
One source of confusion is an inadequate analysis of the operating procedures through which the Fed implements its policy from one short-run period to the next. Another is a widespread misperception of the role that nonpolicy factors play in determining short-

run changes in the money stock. A third is poor understanding of the two-stage decision process implicit in the strategy of using a target path for money as a surrogate for the ultimate targets of policy.

Most noneconomists, and even many economists, seem to believe that the Federal Reserve can straightforwardly cause the money stock to follow a target path. This view implies that the money stock can be treated as an actual instrument of policy and hence that the Federal Reserve can keep money on, or very close to, a target path month by month or even week by week. In fact, however, the *nonpolicy* factors influencing short-run changes in the money stock are much more important than this view acknowledges.

The money supply and demand process—indeed, the entire financial system—is like an inverted pyramid balanced on a small tip, where the tip is the balance sheet of the Federal Reserve. This tip supports all the

Figure 1 shows seasonally adjusted monthly averages of daily data. The target "cones" specified by the Federal Open Market Committee (broken lines) are specified for the 12-month periods from the fourth quarter of the preceding year to the fourth quarter of the current year.



upper layers of the structure, including the money stock in any of its conventional definitions. Other things being equal, an incremental expansion or contraction of the Fed's balance sheet will stimulate an expansion or contraction of the pyramid as a whole. Fed policy decisions are thus a very important determinant of changes in the money stock and other financial magnitudes.

This importance of the Fed's balance sheet is widely understood. Less well understood is the complex and elastic relations between the Fed balance sheet and the balance sheets of the private-sector intermediaries in the financial system. The inverted pyramid is a flexible rather than rigid structure, capable of substantial changes in size and shape that are not directly attributable to changes in the small tip at the bottom controlled by the Fed. This flexibility and adaptability mean that the "multipliers" linking a change in the Fed's balance sheet to changes in the money stock are uncertain and subject to significant variation.

Variations in nonpolicy factors influencing the money stock cannot be accurately predicted by the Fed and are therefore unexpected disturbances when they occur. They can emanate from a variety of sources. On the "supply" side of what is conventionally termed the money market, these disturbances include unexpected changes in the required reserves held by commercial banks, in the banks' holdings of excess reserves, and in banks' borrowings at the Fed discount window. On the "demand" side of the money market, the nonpolicy factors include unexpected changes in the asset preferences of the nonbank private sector for

currency, for demand deposits, and for the various types of time and savings deposits. Indirectly, the demand for and supply of money are also affected by a variety of unexpected disturbances originating outside the money market, elsewhere in the financial system, and in the goods and labor markets.

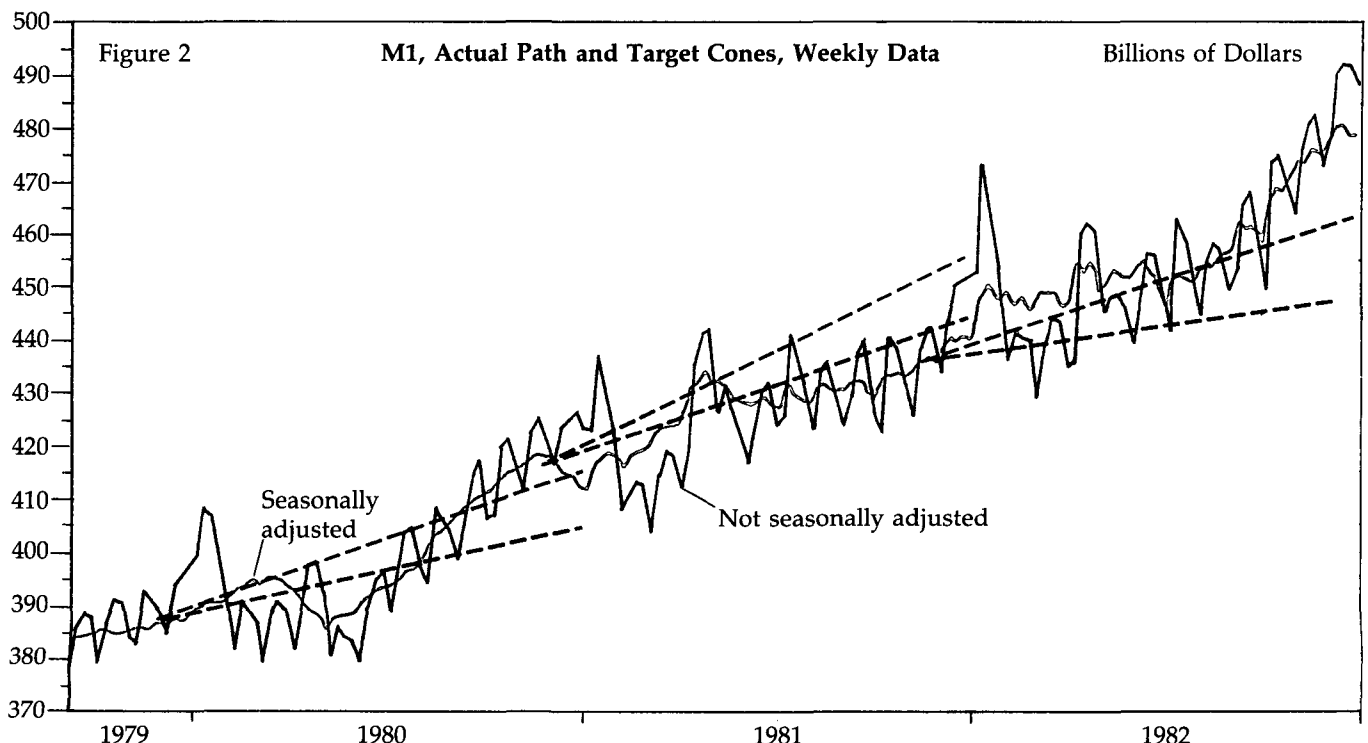
The Federal Reserve confronts sizable variations in each of these nonpolicy factors at one time or another. The effects of any given disturbance on money and interest rates differ somewhat depending on the operating regime used to implement policy. Nonetheless, one or another sort of nonpolicy factor is bound to influence money over a short-run period (one to three months) whatever operating regime the Fed uses.

If close control is defined as continuous prevention of sizable deviations of the actual money stock from a predetermined target path, therefore, close control over the short run is just not possible.

Figures 1 and 2 plot the path of the M1 definition of money for recent years. Growth over this period was anything but smooth, even in the monthly averages. Many observers interpreted these data as evidence that the Fed was conducting policy badly. They presumed that M1 could have been made to grow much more smoothly, and hence kept within the target cones, if the Fed had conscientiously tried to achieve that objective. Some critics, even within the Reagan administration, asserted that the high level of interest rates and the weakness of real activity in 1982 were importantly, even primarily, attributable to the "erratic" pattern of money growth in 1980 and 1981.

Those assertions are seriously misleading; they de-

Figure 2 shows weekly averages of daily data. Weekly observations for seasonally adjusted M1 exhibit markedly greater variability than the monthly averages. And the actual data prior to seasonal adjustment contain large week-to-week fluctuations that are smoothed out by the seasonal adjustment process.



emphasize or altogether ignore the nonpolicy factors influencing money. Worse, they undermine public understanding of why the economy and financial markets have performed poorly.

In contrast, careful research suggests that unexpected variations in nonpolicy factors played a major role during 1979–82 in causing the short-run movements of money outside the target cones established by the Federal Reserve. A substantial part of the irregular fluctuations in Figures 1 and 2, therefore, should be attributed to nonpolicy factors beyond the Fed's control rather than to avoidable errors in policy.

The mistaken belief that the Fed can achieve continuous close control over money in successive short-run periods is fostered by an impression that variations in the "multiplier" linking the money stock to the Fed's balance sheet are relatively small and easily predictable. As Figure 3 on page 9 shows, however, that impression will not stand up to scrutiny.

Two important facts are immediately evident in Figure 3. (1) Month-to-month changes in money attributable to variations in the multiplier are often substantially larger than the actual change in money itself. (2) Large short-run changes in the multiplier typically coincide with changes in the Fed's balance sheet in the *opposite* direction. Whatever the causal explanation of these facts, the mere existence of the negative correlation undermines the presumption that short-run changes in the multiplier are small in importance relative to the policy actions of the Fed.

Some critics argue that the controllability of the money stock could be substantially improved if the Federal Reserve reformed its operating procedures in one way or another. Many advocates of those reforms, however, have exaggerated the likely benefits.

When contemplating alternative operating procedures, analysts should recognize that nonpolicy disturbances inevitably have some sort of consequences for some financial variables. The issue is not whether but rather *where* these consequences will manifest themselves. The beginning of wisdom about the conduct of monetary policy, therefore, is to acknowledge that whatever operating procedures the Fed uses to implement policy, the short-run outcome for financial markets and for the economy is—on *some* occasions—bound to be more adverse than it would have been under different procedures. No one set of procedures can possibly be appropriate for all seasons.

If the time period for evaluating control of money is extended to as much as four to six months (the medium run) or a year or more (the long run), there exists a sense in which it becomes possible for the Federal Reserve to achieve "close" control. This sense, however, is quite different from *continuous* prevention of sizable deviations of money from a target path. Rather, the possibility involves bringing the *average* value of

the money stock measured over a medium or long run close to the *average* value of the target path for the same period. To achieve this averaging control, the Fed must continuously monitor the inevitable short-run deviations of the actual money stock from target path and make frequent adjustments in the settings for its policy instruments to try to move money toward its average target value.

This averaging concept of control is deceptive. It begs entirely the question of whether, and if so how much, the shorter-run variance of the money stock matters. If an averaging concept for control is the only standard for judgment and if the reference period can be arbitrarily chosen to be very long, the Fed can control virtually any single economic variable closely—including inflation, or employment, or the real value of national output!

Nonetheless, if averaging control of money over periods of a year or more is the sort of thing that people want the Fed to do, the deed *can* be done.

If the Federal Reserve made the money stock the exclusive focus of its concern and adopted a policy of averaging control over a sequence of successive calendar years, policy actions would continuously try to return money to its target path as promptly as possible. And policy actions would aim at a temporary, compensating deviation of money from the average target value in the opposite direction from any net overshooting or undershooting earlier in the year.

This relatively mechanical control procedure would have several consequences. It would require that the Fed ignore new information about other variables in the economy when choosing the settings for its policy instruments and ignore the uncomfortable trade-off between variability of the money stock about a target path and the variability of short-term interest rates. The faster the Federal Reserve tries to move money back to target, the greater the volatility of short-term interest rates. This trade-off is estimated to exist even for the medium run, and is pronounced for a short-run period of two months or less.

Should Money Be an Intermediate Target?

Would it be *desirable* to try to make the average value of money closely follow a target path over a medium- or long-run horizon? To state the same question more precisely, should the Fed use money as an "intermediate target," focusing its attention exclusively on deviations of money from a predetermined target path?

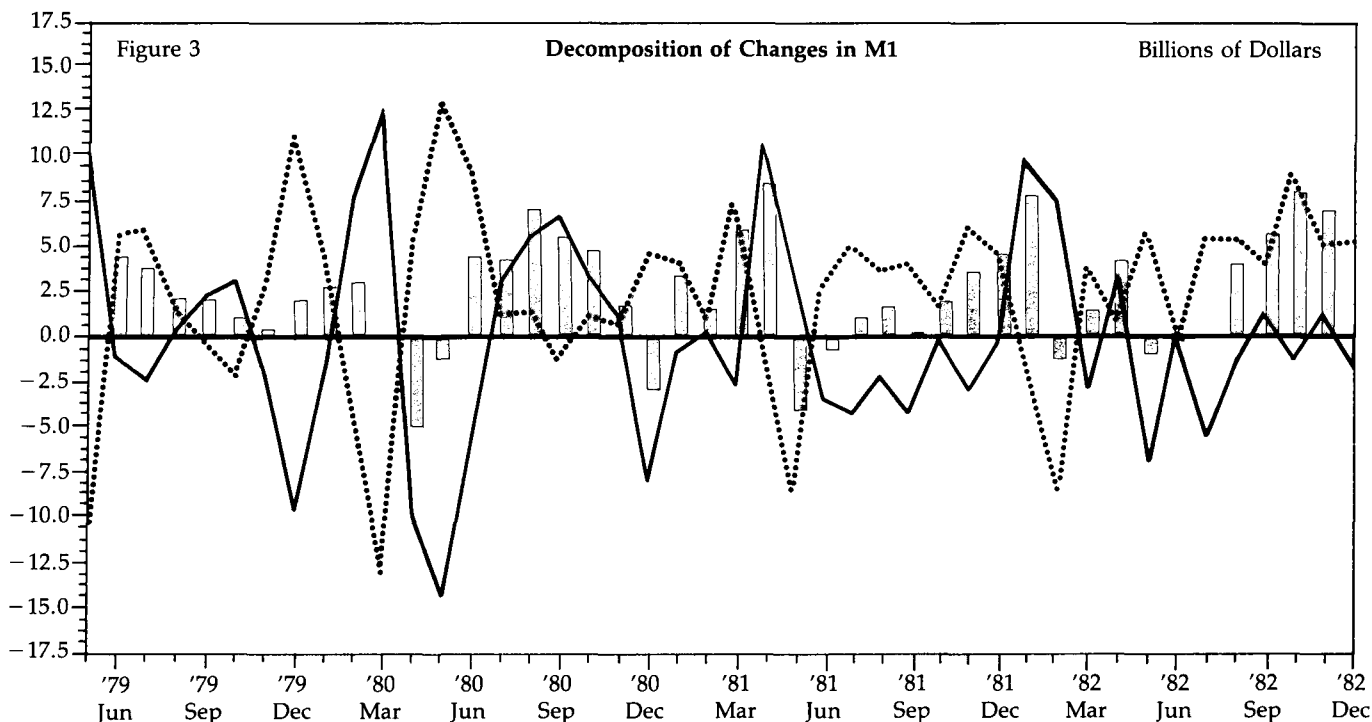
The larger problem facing the Federal Reserve is to select settings for its actual instruments of policy (for example, bank reserves and the discount rate) that are judged most likely to bring about best feasible paths for ultimate target variables (for example, real GNP, employment, and inflation). Intermediate-target strategies decompose this larger problem into two subordinate problems, with decisions at the two levels made

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separately. The upper-level decision requires the Fed to reason backward from desired time paths for the ultimate targets to a target path for the money stock. The lower-level decision takes the target path for money as given and determines the instrument settings designed to keep the actual money stock tracking as closely as possible along its target path. Upper-level calculations of the target path for money are revised only periodically (in an extreme variant, never); but lower-level decisions are revised more or less continuously in response to observed discrepancies between the actual money stock and its target path. The target path for money thus becomes a surrogate for the

due to incompetence or mistakes in judgment by policy makers, and (d) takes better advantage of expectational interactions between policy makers and the private sector. Each of those justifications, however, is analytically inadequate. Neither of the last two is a convincing rationale for a two-stage decision process. And the first two are flatly wrong: a money strategy is demonstrably *less* efficient in processing new data about the economy and *less* successful in coping with uncertainty than a single-stage strategy.

The putative case for using money as a surrogate target on information grounds appeals to the fact that data for money become available frequently and rela-



The bars are the actual monthly changes in M1. The curves are a decomposition of those changes into two parts. The solid curve is the change attributable to the change in the multiplier (the change that would have occurred if the Fed had maintained its balance sheet unchanged from its value in the previous month). The broken-line curve is the change attributable to Fed actions (the change that would have occurred if the multiplier had remained unchanged from the previous month's value). Unborrowed bank reserves (adjusted for changes in reserve requirements) are the measure of the Fed's balance sheet; the multiplier is the ratio of M1 to unborrowed reserves.

ultimate objectives and is the day-by-day operating objective of lower-level policy actions.

Why might it be desirable to decompose the overall decision problem into two stages? What justifies the differences between the upper-level and lower-level periodicities of decision making? An obvious alternative is to aim the policy instruments directly at the ultimate target variables in a single-stage, integrated decision.

Several types of justification are conceivable for the two-stage characteristics of money targeting. They include the assertions that a money strategy (a) uses the flow of new information about the economy more efficiently, (b) copes more successfully with policy makers' uncertainty about how the economy functions, (c) provides better insulation for monetary policy from the vagaries of the political process and from errors

tively promptly whereas ultimate-target variables are glimpsed only intermittently (GNP being observed, for example, only quarterly and with a substantial lag). Because of the better flow of data about the money stock, it is possible for the Fed to monitor closely the behavior of money relative to its target path and to try to correct promptly any incipient deviations. It is not possible to make continuous policy adjustments in response to observed deviations of ultimate-target variables from their desired paths. In no way, however, do those facts justify a two-stage money strategy. The Fed should not use an intermediate variable as a surrogate target rather than aim at the genuine objectives merely because the former is continuously visible while the latter are not.

A similar fallacy underpins the argument that a money strategy copes more successfully with uncer-

tainty. The existence of great uncertainty about how the economy functions, and in particular how it reacts to policy actions, is a compelling reason for making policy decisions cautiously. But uncertainty does not constitute a valid reason for splitting the policy problem into two stages with different periodicities of decisions. For equivalent assumptions about the forms and intensities of uncertainties confronting the Fed, its ultimate objectives, and its competence in making decisions, the results from pursuing a money strategy can never be better, and generally are unambiguously worse, than the results from following a single-stage strategy aimed directly at the ultimate targets.

The rationales for a money strategy that advocate insulation of policy from the vagaries of the political process and from human error and the rationale that appeals to expectational interactions with the private sector are essentially arguments against the exercise of discretion by the Federal Reserve. The insulation rationales bring in complex noneconomic issues, including the pros and cons of political independence for the Fed. The expectational rationale asserts that limits on the Fed's discretion, implemented by credible announcements of a policy rule, will induce the private sector to make better decisions and lead to a more favorable evolution of the economy.

The critical point to grasp here is that such arguments are conceivable justifications for a monetary-policy rule, but are not persuasive justifications for a rule for an intermediate-target variable.

Even if the political grounds for espousing rules were accepted, those grounds would not justify a two-stage strategy focused on a *money* rule. If expectational considerations are thought to justify limits on discretionary actions by announcement of a rule for policy, why should the announcement run in terms of an intermediate-target variable? Proponents of rules for the money stock who appeal to the insulation and expectational justifications overlook a logical gap in their reasoning when they leap from their general arguments against discretion to the specific recommendation of money targeting.

Money Targeting in Practice

Since the mid-1970s, the Federal Open Market Committee (FOMC) has established target cones for money and has accorded prominence to the targets in the policy records of its meetings. When the FOMC changed its operating procedures in October 1979, switching from use of the interest rate on federal funds as its primary instrument of policy to use of the quantity of unborrowed reserves, it restated and strengthened its commitment to the use of money targets.

Notwithstanding some uncertainty about the details, it is thus clear that the FOMC has been following a strategy of money targeting. It is also evident, however, that the FOMC has left itself considerable room for maneuver within the overall outlines of that strategy.

In effect, there has been a serious but not rigid commitment to money as an intermediate target.

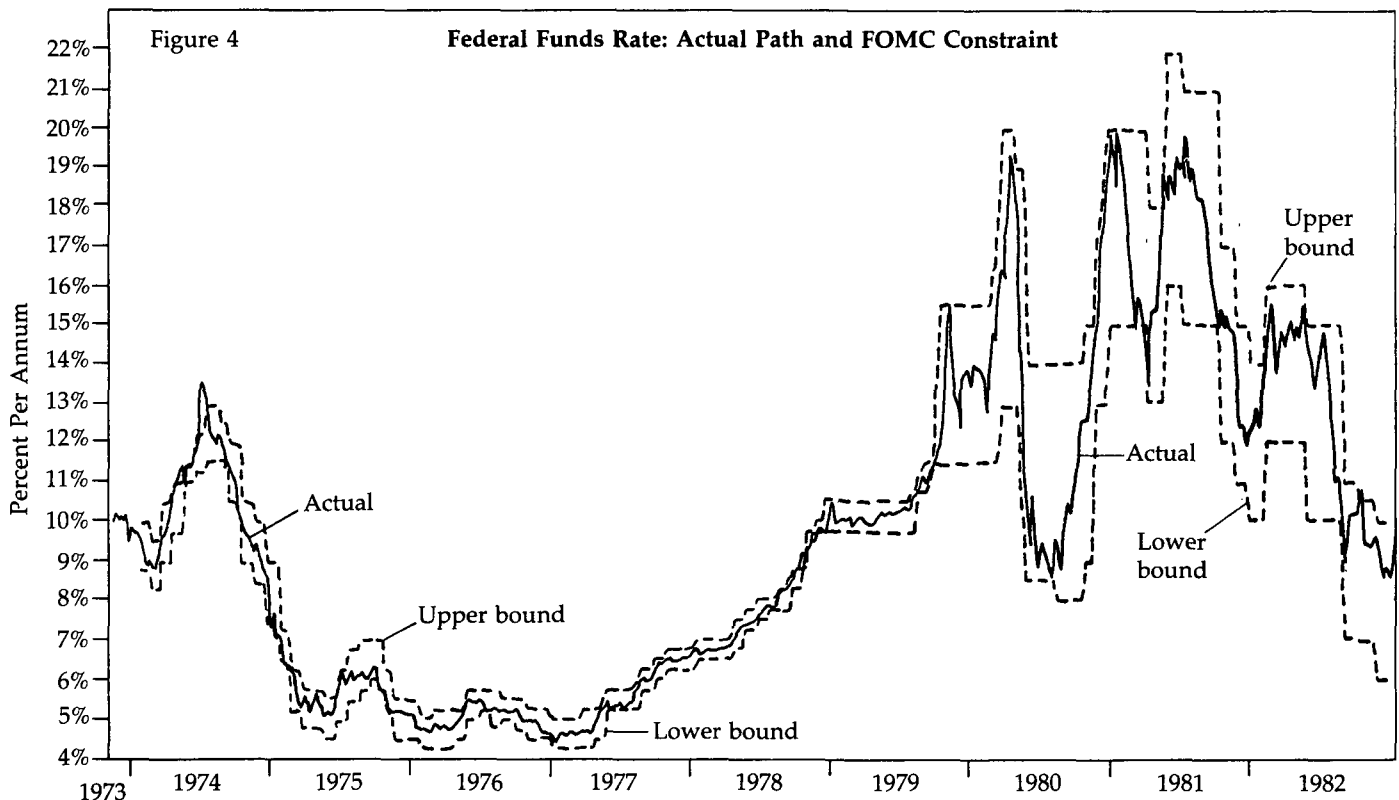
At least five elements of flexibility can be discerned in the Fed's use of the two-stage approach. (1) The target for a monetary aggregate is specified as a range rather than a single-valued path; toward the end of a calendar year, the distance between the lower and upper boundaries of the resulting cone is considerable. (2) When the FOMC specifies a new target in the winter for the ensuing year, it tends to establish the base of the new cone as the recent average value of the *actual* money stock, not of the preceding year's target path. This convention can be tantamount to a major quantitative change in the target path. (3) The FOMC specifies targets for several monetary aggregates rather than one alone. The existence of multiple targets creates substantial scope for discretionary decisions whenever the various monetary aggregates differ in behavior relative to their target paths. (4) The FOMC response to deviations of money from target has tended to be gradual rather than aggressive; at several points in 1979–82, the FOMC explicitly rejected as rapid a return to path as possible, choosing instead to try to return over a period of several months. (5) The FOMC has at times allowed broader economic considerations to override deviations of the monetary aggregates from target paths; instances of this behavior occurred in May 1980 and in the fall of 1982.

Probably all members of the FOMC occasionally give some weight to information about economic variables other than the money stock when deciding how to vote at meetings. The individual FOMC members least enamored with money targeting undoubtedly give substantial weight to other considerations more or less continuously.

Some recent critics of the Fed question the importance of the October 1979 change in operating procedures. They assert that it still systematically inhibits movements of the federal funds rate, much as it did before October 1979. They are incorrect. Figure 4 provides some evidence that the October 1979 decision constituted a major change in the day-to-day conduct of open-market operations.

A more rigid pursuit of the money targets would have produced even wider swings in interest rates in 1980–82 than those actually experienced. Given the large nonpolicy disturbances affecting the economy in 1980–82, interest rates would undoubtedly have fluctuated more than in previous years even if the Fed had continued to conduct policy with the funds rate as its main instrument. Nevertheless, it strains credulity beyond the breaking point to imagine that a 1980–82 path for the funds rate similar to that in Figure 4 could have been generated under the operating procedures in use prior to October 1979.

When the funds rate approached the upper or lower boundary of its constraint after October 1979, the boundary was changed promptly—with greater speed than in previous years. Even more important, the



When implementing policy with the federal funds rate as its main instrument before October 1979, the FOMC specified at each meeting a range for the funds rate; the rate was not permitted to move outside those boundaries in the following weeks. Known as the intermeeting funds-rate constraint, the range was quite narrow (seldom more than 100 basis points, sometimes as little as 50 or 75 points). With the change in operating procedures in October 1979, this constraint was widened a great deal (to at least 400 basis points, and at times even to 600 points). This change is dramatically evident in the contrast between the portions of Figure 4 to the left and the right of October 1979.

existence of the greatly widened constraint permitted market pressures to move the funds rate notably faster and further, toward a boundary but still within the constraint, than was possible before October 1979. A prominent characteristic of an operating procedure that uses the quantity of bank reserves as the main instrument of policy is that it permits prompt, substantial changes of the funds rate without necessitating an explicit decision to that effect by the FOMC. In part because of that characteristic, the FOMC has inhibited changes in the funds rate in 1980–82 markedly less than it would have under the former procedures.

Although economic logic argues that an intermediate-target strategy is an inferior approach to the conduct of monetary policy, as a practical matter the Federal Reserve is committed to such a strategy for the near-term future. Some form of money targeting has been required by law since 1978. Equally important, the Fed—and even more so the Reagan administration—has encouraged the belief that firm adherence to money targets is the only effective way to reduce inflation and keep it under control.

The political reality, therefore, is that the Federal Reserve is boxed in. At least for the next year or two, it will not be able to describe monetary policy to outsiders without announcing money targets and demonstrating that reasonable efforts are being made to achieve them.

What is the least bad way to conduct a money strategy, given that the nation is politically stuck with it? My view is that the existing elements of flexibility in the approach need to be expanded and to be explained better to the general public. Notwithstanding urgings by some members of the Reagan administration, the Federal Reserve should certainly not go in the opposite direction, adhering more closely to a purist variant of the strategy.

Even more than in the past, the Fed should avoid focusing attention on a single intermediate target. Deviations of a single monetary aggregate from a prespecified target path are sometimes undesirable, but sometimes not. If target paths for several aggregates are specified, it is more likely that discretionary judgment will be able to avert instances in which money is wrongly pushed back toward a target path that is no longer appropriate. Better still, it would be preferable to broaden the menu of intermediate-target variables to include "credit" aggregates as well as the conventional money definitions. The Fed should also maintain at least as much flexibility as it now has in varying the speed with which it tries to return the aggregates to target paths.

Most important of all, the Federal Reserve should continuously reevaluate the reasonableness of the target paths and be willing to adjust them promptly if incoming information and projections warrant a change.

Altering the targets requires a careful public explanation of why the changes are desirable. Any upward adjustment will be particularly difficult to explain so long as inflation continues at an unacceptably high rate. But adjustments, down or up, may well be desirable, and not merely on the semi-annual occasions when target paths are reviewed.

No sensible person would suggest tilting Italy to straighten up the Leaning Tower of Pisa. Essentially the same common sense should be applied to money targets. Satisfactory behavior of the ultimate targets of policy is much more important than adherence to a previously specified path for a surrogate money target.

Needed: A Refocusing of the Debate

George Orwell wryly observed that the facts are often disregarded by both sides in a debate. Some people, he noted, will always assume that the bishop has a mistress. Others will go to any length to continue believing that the bishop simply regards pastoral care as a 24-hour duty. The traditional debate between monetarists and antimonetarists may be another illustration of these propensities. Yet I still nourish the hope that a dissipation of confusion and a narrowing of disagreement is possible.

In particular, I see little reason for continued controversy about alternative Federal Reserve operating procedures and its ability to control the money stock. The analysis summarized here does not give a laurel wreath to either the traditional monetarist or the traditional antimonetarist position. The best insights economists have about operating procedures cannot, in fact, be accurately described as either monetarist or antimonetarist. Similarly, what is needed in discussions about the determination of the money stock is a more eclectic perspective, one that acknowledges not only the fundamental role of Fed policies but also the importance of nonpolicy influences.

The arguments against the use of the money stock as a surrogate target are controversial. Here too, however, I believe that only limited grounds exist for further debate. If correct, my arguments provide a solid case for rejecting the use of a two-stage money strategy. Those who continue to support such an approach should at least face those arguments squarely and show why they are wrong or inapplicable.

At the time this is written, financial markets in the United States and abroad are more than normally fragile. The probability of a spate of bankruptcies of nonfinancial firms and the consequent failure of numerous financial intermediaries, although not large, is nonetheless distressingly high relative to the probability of such events in a healthy economy. Unexpected events, including a more protracted recession than foreseen by economic forecasters, could raise that probability further. If major cracks in the financial system should start to appear and confidence should

suddenly weaken, that would be an especially inappropriate time for zealous efforts to achieve prespecified money targets. The deterioration in confidence could spark a sharp increase in the precautionary demand for liquid assets. A correct response by the Fed would accommodate those demands, despite a resulting increase in the money stock.

The case against a money strategy, it should be clear, is not an "anti-money" case. Still less is it "pro-interest-rate." When implementing policy, the Fed does not have to choose, and should not choose, between emphasizing a financial quantity or a financial price. The fundamental problem with money targeting is its two-stage decision procedure, not its selection of a financial quantity as the surrogate target. A two-stage strategy using a price variable as the surrogate target (for example, a long-term interest rate) would in many circumstances be even worse than a money strategy.

The genuine issues confronting the Federal Reserve are obscured by identifying them as money versus interest rates or monetarism versus Keynesianism. Monetarists who argue against stabilizing interest rates are correct—some of the time. Keynesians who argue against stabilizing financial quantities are correct—some of the time. The key point, however, is that neither a price-stabilization nor a quantity-stabilization presumption is the appropriate guideline for monetary policy in all circumstances.

No good reason exists for the Fed to emphasize quantities instead of prices, or prices instead of quantities. Operas require a libretto and a score. A sensible approach to policy requires an integrated perception of both prices and quantities, combined with a differentiation of decisions in accordance with the current and prospective circumstances of the economy.

The truly important issues about the conduct of monetary policy are too often neglected. These issues include rules versus discretion (the appropriate degree of "activism" permitted to the Federal Reserve), the relations between monetary policy and fiscal policy (whether to coordinate the two, and whether the Fed should have political autonomy to pursue goals different from those sought by the rest of government), the best feasible macroeconomic policies for reducing inflation (which policies are least costly in terms of unemployment, and which policies are credible), and the preferred means of coping with the interdependence of monetary policy in the United States and monetary policies in the rest of the world (the difficulties and potentialities of cooperation with other nations' governments). Each of these issues is justifiably controversial. Each merits extensive debate.

With such difficult issues as these to analyze, economists and political scientists and social theorists—not to mention policy makers themselves—should put the now sterile debates about monetarism and Keynesianism behind them and get on with higher priority matters that genuinely command attention. (B)

Industrial Policy Is Not the Major Reason for Japan's Success

A trillion-dollar economy operating in a democratic society depends on much more than national plans and "visions."

Philip H. Trezise

THERE IS A widespread belief that in Japan public authorities choose, or participate intimately in choosing, the specific industrial sectors into which capital and labor are to be preferentially directed as well as those sectors that are to be discouraged and discarded.

I would argue instead that the Japanese government is not able, any more than other democratic governments are able, to pursue an internally consistent industrial policy of this kind.

In my view, the impressive economic growth and social stability of postwar Japan are not owing in any decisive degree to the microeconomic decision making that is often held up as a source of Japanese accomplishments, even though there has been a pervasive pattern of interventionism in economic life by the permanent civil service and its political masters.

During the Allied Occupation (1945–51), Japan's government established a planning mechanism which in time became the Economic Planning Agency (EPA), sited in the prime minister's office, with a mandate to draw up national economic and social plans as guidelines for the government's economic policy. Since 1955, the EPA has prepared eight or nine medium- or long-term plans, including the famed 1960 plan for doubling national income in ten years.

The permanent members—mainly businessmen—of the prime minister's Economic Council, supplemented by several hundred distinguished individuals from business, the universities, the press, and organized private groups, are responsible for advising and directing the EPA staff, which itself is supplemented by officials from ministries and agencies concerned with economic policy. Once drafted, a plan is submitted to the cabinet, whose approval makes it the nominal guidebook for policy.

In the national plans can be found estimates or projections of future growth and suggested ways in which public policy should be changed or directed to achieve stated national goals. During the period of a plan, revisions are made and targets or projections are adjusted to take account of unanticipated developments. In a very broad sense the plan provides a

flexible framework for policies toward individual sectors or industries.

Loosely linked to the national plans are periodic statements coming from the Ministry of International Trade and Industry (MITI) that envision a preferred pattern for Japan's future industrial structure. MITI has had an activist bureaucracy that has claimed credit for determining the character of Japanese postwar growth. Its "vision" for the 1970s was that the future of Japanese industry lay in becoming predominantly knowledge-intensive; the computer or data-processing sector was given special emphasis by MITI and did achieve substantial growth.

MITI's overall prescriptions and forecasts are also prepared under the aegis of an advisory body, the Industrial Structure Deliberation Council, made up of senior business leaders and other public figures. At the bureau level, MITI officials can consult advisory committees representing individual industries. The "Japan, Incorporated," image takes much of its form from this institutionalized structure for exchange of ideas and information.

Special measures for regions and municipalities can fit within the concept of a national industrial policy. Like most countries, Japan has sought to locate or relocate business and industry in designated regions and has used the conventional kinds of tax and loan incentives to that end. Occasionally this has been complemented by comprehensive reports on major regions that also suggest policies to foster regional development.

Japan is not as legalistic a society as the United States, and government officials have considerable latitude, without specific legal authority, to direct or induce private business to act or refrain from acting. Nonetheless, the Diet is asked from time to time to enact laws designating one or more industries for special attention from the bureaucracy. The fact that an industry has been singled out in a law gives weight to a claim for financial aid from public funds, or for other benefits available only through official channels.

Plans, visions, or special designation legislation are



mainly hortatory in nature. In a market economy, some form of subsidy is normally required if resources are to be consciously directed to favored industries. A principal channel for distributing subsidies is the expenditure budget.

Japan's fiscal system has what amounts to four budgets or budget groupings, including the general account for usual governmental activities, special accounts for government-affiliated agencies, such as the national railways, and budgets for prefectures and municipalities. Finally, Japan has a form of capital budget known as the Fiscal Loan and Investment Program (FILP) under which lending or investment authority is given to a host of government corporations and institutions.

This budget structure channels a sizable and increasing fraction of Japan's GNP through the government in its various manifestations. The 1980 budget total (before supplemental appropriations) for the general account, for locally financed regional budgets, and the FILP, was 85 trillion yen, or about 34 percent of a GNP of 250 trillion yen. The government's share of gross domestic capital formation has ranged over the years from 20 to 30 percent.

In principle, therefore, the government's investments could be so distributed as to promote "strategic" or "target" private industries as against others. Many observers consider that one of the FILP agencies in particular, the Japan Development Bank (JDB), has had and continues to have a key part in aiding selected industries to expand. Created in 1951, the JDB's present mission is to foster "industrial development and economic and social progress." Its loans to selected private borrowers, on preferential terms, are thus intended and expected to support investments that are judged to be somehow more in the public interest than others.

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Many believe JDB lending has a multiplier effect on investment in favored sectors, since it is supposed to signal to the commercial banks which companies or industries the government wishes to receive priority treatment.

Special tax measures have been prominent in Japan's fiscal system. A 1974 study found more than one hundred separate special provisions, including tax-free treatment of interest income for small savers, various forms of favorable depreciation and depletion allowances, and tax credits for research and development.

The possibilities of using preferential tax treatment for carrying out industrial policy need not be labored here. Japan's current import regime operates quite differentially among the protected sectors, as I will explain below.

Although Japanese business is certainly rivalrous enough in practice, anti-trust or government enforcement of competition is not a compelling feature of public policy. Resort to anti-competitive arrangements, mainly cartels, has been frequent, either to mitigate recessionary problems or to promote industrial rationalization. Cartels are approved selectively depending on which industries MITI or another ministry believes need relief from the rigors of competition.

Some Common-Sense Reservations

The foregoing section has been a catalogue of institutions, instruments, and policies that may be said to make up the elements of a Japanese industrial policy. It is not surprising that some Japan-watchers have concluded that such a policy, operating to select the likely industrial winners and to discourage the losers, has been the prime force in Japan's extraordinary industrial growth. After all, Japanese officials say that they have had an industrial policy designed to foster industries in which Japan has or could have a comparative advantage. Japan's industries on the whole have prospered. The connection appears to be evident.

There are common-sense reasons for having reservations about this easy coupling. Japan is a democracy. A variety of interest groups, each with votes, must be taken into account by government. Resources, benefits, and favors have to be distributed to many claimants, not all of whom will be even at average levels of productivity or promise.

One has to be doubtful, too, about the picture of wise bureaucrats sitting down with wise industrialists to plan in some detail the future shape of an economy that now produces, gross, more than a trillion dollars worth of goods and services. What officials and advisers say or prescribe obviously can matter. But the allocation of resources in a free market economy—certainly in one as big as Japan's—depends on myriad decisions taken throughout the country. Over many of these, government and its spokesmen have only indirect or tenuous influence. These reflections tend

to be confirmed by a closer look at the instruments of Japan's industrial policy.

Japan's national plans do not have binding force on anyone. They do not determine budget allocations or government capital formation. They do not impose obligations, legal or otherwise, on either the public or the private sector. Basically they are statements of goals or targets, with suggestions for policy measures which, if adopted and carried out, would help toward achieving the goals. Unless these policies have already been decided by the competent ministries, there is no basis for supposing that specific actions will follow. Often the policy prescriptions are little more than homilies.

The average annual rate of GNP growth in the plans is referred to as the government's medium-term growth target. But the yearly budget is compiled with reference to the immediate economic problems facing the country. It is possible that an optimistic forecast of long-term GNP growth will induce increased private sector investment, but an industrial policy could hardly rest solely on hoped-for effects of official statements.

Regional planning in Japan must have had an effect on the movement of resources, for regional development programs often have included material incentives for industrial investment. To my knowledge no one has attempted to measure or assess the results, and the evidence in situations where discernible effects might be expected is unconvincing.

The "visions" seen by MITI and its Industrial Structure Deliberation Council represent a more pointed form of industrial policy making, since they do include specific economic and industrial objectives. The current vision identifies a number of technological development tasks for the 1980s in such fields as energy, data processing, telecommunications, and genetics. It urges more R&D spending, public as well as private. And it sees a role for government in the development of high-cost, high-risk, long-lead-time technologies.

What the vision for the 1980s does not do is provide resources. It does not even propose budgetary priorities. At most, it presents a description of how some aspects of the Japanese economy and society might appear in the 1990s if MITI and its advisers are sufficiently heeded by the budget makers and private investors—and if, in fact, the technologies listed in the vision prove to be feasible in commercial terms.

As I have said, about one-third of Japan's current GNP passes through the central and local governments. Both regularly invest in physical assets. Investments financed through the ordinary budget are supplemented by financing provided through the capital budget or FILP to public agencies and enterprises and to private sectors as well. In 1979, the government was responsible for 29 percent of gross domestic capital formation. It would seem, therefore, that public investments could serve to promote private industries specially targeted for expansion.

The reality is that the bulk of public investment through the regular budgets goes to public works. In

largest part, this kind of investment is handled by the prefectural and local governments, which hardly would be chosen as vehicles for the management of a selective industrial policy. Except for a small "industrial investment" line item and a much larger and growing sum for energy investments, the fields for public investment through the regular budgets are those that have usually been considered, at least in market economies, as having a straightforwardly public character.

Deficits in a number of government programs are funded through the central government's general account budget, primarily for weak sectors like the national railway system and small business. The big subsidies in the budget do not go to growth industries.

Under the Fiscal Loan and Investment Program, money can be invested directly or be lent to public or private bodies for approved investment purposes. The FILP for fiscal 1980 was set at 18 trillion yen, or upwards of \$80 billion. This large amount, made available at better than market terms, appears to offer potential leverage for determining which industries should be enabled to forge ahead.

Closer examination raises some doubts. The Bank of Japan's annual statistical report identifies the proposed recipients of FILP funds in 1979. In all there were 50 separate entities, plus "local governments," to divide up the pie. Four individual borrowers and the category of "local governments" each had available a trillion yen or more: the Housing Loan Corporation, the Peoples' Finance Corporation (one of the small business lending agencies), the Small Business Finance Corporation (another), and the Japan National Railways. Local governments were to get 2.9 trillion. These five borrowers, which accounted for more than 60 percent of the FILP, may provide many worthy services to Japanese society, but it is difficult to credit any of them with being closely connected with promising growth sectors, unless housing is so considered.

Other big FILP agencies were the Japan Housing Corporation (public housing), the Export-Import Bank,



the Japan Highway Corporation, the Japan Development Bank, and the Agriculture, Forestry, and Fisheries Finance Corporation, each having had borrowing authority in excess of 500 billion yen. These and a few others accounted for another 27-plus percent of the FILP. Three dozen smaller government corporations and special accounts were to get the remaining 12 percent of the 1979 FILP.

The fact is that the FILP sweeps in a great hodgepodge of governmental and quasi-governmental activities which have little in common other than having a supportive constituency somewhere in the country. It is not in significant part an industrial policy program. Most of its financing goes to activities that would be considered of a public character or a responsibility partially assumed by governments everywhere.

Principal exceptions are the Export-Import Bank and the Japan Development Bank. In the Ex-Im case, a bank able to provide favorable financing for exports must have some influence on industrial development. Ex-Im's export credits have gone in very largest part to finance sales of heavy industry products, led by ships. It is entirely plausible that the expansion of this industrial sector was facilitated by the availability of relatively easy financing for the export business. But all of Japan's principal competitors offer similar services. Each justifies its policy as necessary to meet competition from the others.

The Development Bank Role

The Development Bank's role is to foster industrial development and economic and social progress. JDB lending to selected private borrowers, on preferential terms, is thus intended to support investments that are judged to be more in the public interest than others, and such JDB operations do conform to the concept of a selective industrial development policy. Many foreign observers and Japanese believe that the Development Bank's loans also signal to the private banks those companies or industries that the government wishes to receive special treatment.

During the first 20 years of its life, when all of the JDB's lending came to about \$13 billion, the two principal customer industries were merchant shipping (31.5 percent of all loans) and the electric utilities (21.3 percent). Together with regional and urban development (for example, shopping centers, warehouses, truck terminals), these industries accounted for more than three-quarters of all JDB loans. The amounts available for the rest of Japanese industry were simply not great; the "strategic" steel industry, for instance, received less than one percent of total JDB lending, or about \$110 million in total over two decades.

Since 1972, the emphases in the JDB program have undergone a notable change. Urban-regional development and quality of life (primarily pollution prevention) investments dominated JDB lending from 1973

through 1979, with the share represented by energy loans (for nuclear power, oil refining and storage, LNG power generating plants, energy conservation projects, etc.) having come back after a long decline. The ocean shipping category, meanwhile, has fallen to a relatively negligible point. Effectively, the bulk of the post-1972 lending program was for infrastructure and improvements in the quality of Japanese life. The impact of this on industrial location, efficient distribution, adjustment to environmental controls, and productivity in general conceivably was strongly positive. Although Japan was anything but a capital-short country in the 1970s, some of the projects financed by the JDB might have been neglected or delayed had commercial loans been required. But the Development Bank's net lending accounted for just 1 percent of private capital formation, excluding housing, during these years. If all the JDB infrastructure lending had been left to the private capital market, the economy probably would not have developed differently.

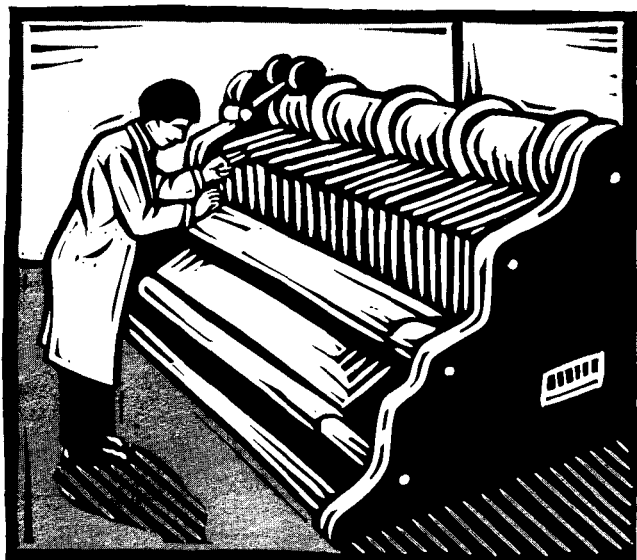
To find a more industry-specific contribution from the JDB it is necessary (energy projects aside) to go to the technology development category, which accounted for about 11 percent of all JDB lending during the period, an average of \$313 million equivalent per year. The bank says that these loans went to three types of project: (1) computer leasing, manufacturing, and software; (2) raising the technological level of the electronics and machinery industries; and (3) general technological development. The preoccupation here has been with the computer sector, which has received the largest share of technology development loans, much of it to help finance a joint leasing company formed under MITI guidance by the major computer producers. Computers have long been considered a strategic or target industry. Other government financial aids, mainly for research and development, have been given to the computer sector; one estimate is that these subsidies came to a not-very-staggering total of about \$340 million for the whole period 1972-79.

All this can be summed up in the conclusion that in Japan public funds have not been directed in any sizable amounts, relative to total investment requirements, to the private industries or economic sectors with high growth potential. Not only appropriated monies but also large captive deposits available to the government for investment have gone in overwhelming part either to ailing but politically important sectors or to purposes normally considered public. Nor is it easily believable that Japan's horde of public corporations and specialized agencies are all efficient spenders and investors.

"Special" tax measures, designed to "help attain certain economic policy aims," have been a continuing feature of the Japanese tax system, but the tendency has been to spread the benefits to people in related activities until all claimants were satisfied and none was specially treated. Thus the tax system today does not square very exactly with the concept of incentives

carefully directed to the encouragement of prospective industrial growth sectors.

For example, an extra slice of first year depreciation is permitted for ten categories of machinery and equipment. The most generous treatment (an additional 27 percent) is given to machinery for the prevention of



pollution. Other designated categories are non-polluting machinery, energy-saving machinery, materials-recycling machinery, certain water supply equipment, ocean-going ships, integrated systems of data analysis equipment and industrial machinery, commercial aircraft, and buildings which house retail stores. Much of this may well make excellent policy sense, but except for the data analysis category (which covers industrial robots) the relationship to picking industrial winners is obscure.

Similarly, accelerated depreciation is available to commercial and industrial cooperatives (e.g., in the textile industry), to companies employing handicapped persons, to rental housing enterprises, to owners of crude oil storage tanks, and to investors in fireproof warehouses and grain silos.

A tax credit for extra research and development expense is probably more pertinent to the notion of an industrial policy. A corporation may deduct 20 percent of R&D spending above a base period amount, and this credit may be as much as 10 percent of corporate tax. The R&D tax credit is available to all corporations, not merely to prospective winners.

This recital suggests that tax incentives are used in Japan for a variety of purposes, including quite incidentally what I have defined as industrial policy.

With respect to trade policy, we should dispose right away of the proposition that Japan, unlike the United States, has protected the promising growth sectors but has thrown laggards to the import wolves. It is simply not so.

During the high-growth decades—the 1950s and 1960s—when Japan's industrial structure was undergoing its phenomenal transformation, everything was

protected. When liberalization did come, it was applied most slowly to the weakest, least competitive industries. Agricultural protection stands out, a circumstance far from unique to Japan. Present tariff schedules are about at the industrial country average and are slated to fall to quite low levels. They are skewed, however, to afford greatest protection to the food-processing industry, which struggles under high material costs because of the restrictions on agricultural imports.

As to the use of trade policy to expedite the demise of older, inefficient sectors, it is useful to consider the often-cited case of textiles. The weakest textile sector is apparel, which happens also to be a large employer, with almost 5 percent of the manufacturing work force in 1979. It has the lowest value added per worker and so the lowest wages. It has not been a starring growth industry. Neither has it been disappearing. In 1973–79, apparel employment in Japan *rose*, absolutely and as a proportion of the manufacturing labor force.

A way to have hastened the decline of the apparel industry would have been to have opened it to full-scale import competition by eliminating tariffs which range from 11.2 to 17.5 percent. That this has not been done is understandable. But if a policy of discouraging the losers does not apply to a sector like apparel, the question can be asked, where might it apply?

The other side of trade policy, of course, is export promotion. As long as it was permitted, Japan used a range of incentives for exports, primarily through the tax system. These eventually attracted opposition from GATT and from Japan's trading partners and were discontinued. Japan's current export promotion program consists of Export-Import Bank lending (an "acceptable" export subsidy), a modest tax deferral scheme for small exporters (the United States has a larger one for all exporters), and a set of overseas commercial offices (the Japan Export Trade Recovery Organization). There is not much for industrial policy here.

Concerns About "Excessive" Competition

It is not wholly clear where policy toward competition should fit within a policy aimed at promoting the most promising industrial sectors. Should it stress competition and survival of the fittest? Or should it aim at combinations and mergers to gain scale economies and other hoped-for benefits?

Concern about the wastes of "excessive" competition has been a preoccupation of MITI officials, who have regularly sought to foster legal cartels and to bring about mergers. Much of this effort has been directed to industries with numerous small firms, especially textiles and sundries. In the past, too, cartels were frequently formed for the management of the restrictions on exports that Japan's trading partners had insisted upon. A goodly part of competition or, better, anti-competition policy was thus directed at the dual economy, in which many tiny firms have coexisted



with big industry. It has been—is—a kind of industrial policy, but not the kind that is under discussion here.

MITI has sometimes tried to encourage mergers in the more concentrated industries, with indifferent success. In the 1960s an effort to combine the automobile companies into three big firms came to nothing. A proposed amendment to the antimonopoly law in 1963 would have allowed MITI to exempt industries from the law in order to create large firms that would be better able to compete against foreign rivals. It was opposed by organized industry and the banks and was not enacted.

Where the emphasis on anti-competitive solutions may have been successful and more relevant was in the adjustment to the 1974–75 recession, through the use of cartels organized to share the distress experienced by industries like shipbuilding.

Doubts Are Reasonable

This review justifies a reasonable doubt about whether industrial policy is a major reason for Japanese industrial accomplishments.

Planning, it turns out, is not linked to budgets and resources, except perhaps at the regional or municipal level where no one would look for a coherent policy of selecting industrial winners. A sizable fraction of the nation's GNP goes through the government. In overwhelming part, however, government spending is for normal public purposes. The amounts directed to specific industrial sectors otherwise are quite small, almost trivial. Tax policy aims at a wide range of objectives beyond revenue raising. But most of these objectives are only incidentally related to a recognizable industrial policy. Tariffs are used in Japan, as everywhere, to prop up the weak and vulnerable sectors. Competition policy may have had its uses in easing the adjustment to economic downturns but its principal application, not very successful, has been to

the small-firm portion of Japan's dual economy.

There remains the proposition that governmental guidance does it. A 1981 London *Economist* essay entitled "Japan's Gentle Persuaders" argued that industrial policy is all a matter of persuasion. Policies evolve, it is said, through the interaction of officials with businessmen. As ideas are developed, they become MITI orthodoxy and are propagandized steadily through the ubiquitous Japanese press. In time, Japan's industrialists, motivated by a desire to conform, make MITI's ideas their own.

There probably is something here, although perhaps less than the *Economist* correspondent saw. It is easily believable that the intensive sectoral discussions organized by MITI do add to the sum of knowledge of the industrialist members. MITI's emphasis in the early 1970s on moving into "knowledge-intensive" industries may well have caused businessmen to look more closely at the possibilities of the computer.

What's in an Investment Choice?

The more difficult question is how it translates into decision making at the level of the firm. Investment choices must be tied to specific products and production methods. Can one suppose, really, that the management of Hitachi or Toshiba will elect to commit large sums of company funds to specific investments because MITI has had a vision of the technologies of the future? Japan's consumer electronic sector has made a stunning breakthrough with home video tape recorders, which are now the industry's largest export. Is it plausible that MITI's guidance was a primary factor in this? I have not heard it so claimed.

The truth is that the Japanese economy and Japanese society resist pat descriptions and easy explanations. Of course government has had a major role in the nation's economic achievements. Where else would one look for the monetary and fiscal policies that have underlain the relatively steady course of the economy over 30 years? Of course government and business have had a close relationship in Japan. What would be expected? The Liberal-Democratic Party, after all, is the conservative party, while the principal opposition party is committed to a socialist economy. Government and agriculture have had an even closer relationship. And, although agriculture is anything but a high-productivity industry, the government may have been right in deciding to pour large subsidies into it as a contribution to political and social stability in a time of rapid economic change. If so, here was an effective form of industrial policy, but quite different from that usually talked about. Industrial policy in the sense now current also may have played a part in Japan's success, or at least seems not to have noticeably hindered it. But to attribute to industrial policy a crucial role is an expression of faith, not an argument supported by discernible facts. ®

How the Iranian Military Expelled the Iraqis

Seriously weakened by a revolution and two purges, Iran's armed forces have re-emerged as an effective fighting force.

William F. Hickman

IN THE WAKE of the Iranian revolution of 1978-79, foreign observers generally believed that Iran's army had been decimated. As a result, when Iraq invaded Iran in September 1980, it was widely assumed that the Iranian military was too weak to protect the country and would be incapable of offering significant resistance. Although some territory was lost in the early weeks of the war, Iraq was unable to force Iran into submission. Within a year Iran had seized the initiative, regaining its lost territory by the spring of 1982 and carrying the war to Iraq itself during the following summer.

Iran's successful defense created a puzzle for Western analysts: How did Iran's military emerge from its collapse after the revolution to expel the Iraqis? Does this dramatic improvement on the battlefield reflect a reconstituted Iranian military, the fervor of the Revolutionary Guards, or a combination of the two?

Immediately after the revolution the provisional government announced that a purge of the armed forces of the "former diabolical regime" was to be a top priority. What happened over the next few months has been likened by the Western press to the Reign of Terror that followed the French Revolution in 1793, but this is a false analogy. Although several dozen military officers were executed, the purge of the military was much less severe in the early months of Islamic Iran than was originally thought. It was only much later that the purge cut deeply into the military, and then it affected the army much more than the other services.

Action against the military can be broken down into two distinct periods. The first extended roughly from the establishment of the provisional Islamic government in mid-February 1979 to the appointment of the first minister of national defense in late September 1979. During this period, command of the military was entrusted to a group of former officers who had established their revolutionary credentials by running afoul of the shah prior to the revolution.

Executions during this period were generally limited to the most senior personnel in each service and those

who had committed specific counterrevolutionary acts, such as leading or participating in the assaults by the military or the national police against the mass demonstrations. The rest of the purge consisted of the forced retirement, rather than execution, of hundreds of military personnel, including all major generals and most brigadier generals. Despite the publicity generated by the deaths of the shah's senior generals, an examination of the announced executions through September indicates, the military itself was not the primary target of the purge.

Of the 404 announced executions over the entire period of the first purge, only 21 percent (85) were of military personnel. In contrast, 37.9 percent (153) were members of SAVAK and the national police. Out of an estimated population of more than 200 general officers in the military, 26 were executed and the rest forcibly retired. Lower-ranking officers were among those executed and retired, but there exists little evidence of a policy aimed at their wholesale removal, as there was in the case of the general officers.

Statements by Ayatollah Khomeini and others in favor of a strong military were influential factors in limiting the effects of the purge in the early months of the Islamic Republic, but the most important factor mitigating against a deeper purge in the early period was the continuing political instability in the country. In April, the provisional government dispatched army troops to quell unrest in the northern province of Mazandaran, and by July demands for regional and tribal autonomy had erupted in several areas, necessitating further troop deployments.

The second purge, which began in late September of 1979, was of a very different kind, reflecting in part the popular demand for fundamental change within the military, but also the increased control exercised by Khomeini, which reduced the government's dependence on the military officers it had installed in command positions. Mostafa Chamran, the former deputy prime minister for revolutionary affairs in the provisional government, was appointed the first civilian minister of defense in late September.



In public statements, Chamran outlined the thrust of his program for the military by identifying a series of problems and explaining how they would be corrected by his intended reorganization. Foremost was the need to alter the philosophical outlook of the military, changing it from "a tool" for the defense of "Zionism and imperialism" to an organization that would safeguard the revolution and guard Iran's independence and territorial integrity. To achieve this redirection of efforts, he indicated, a good deal of purging had to take place.

Explicitly endorsing the concept of a strong national military establishment, Chamran addressed the organization of the Islamic military, saying that the army should be turned into a specialized and modern technical cadre, and that "the entire Iranian nation should become the soldiers of the revolution." A few weeks later, when the hostage crisis erupted and military retaliation by the United States seemed probable, Ayatollah Khomeini incorporated this theme and called for the creation of an "Army of Twenty Million" to combat imperialism. This call to arms of virtually anyone willing and able to carry a gun resulted in the establishment of a staff for mobilization of the people and widespread weapons training courses in schools and factories and on television.

This effort represented a significant organizational step for the armed forces of Iran. By providing a large pool of semitrained personnel on which to draw during military contingencies, the requirement for maintaining the army at prerevolution size was eliminated.

Having established his goals for the military, Chamran quickly implemented his promised purge, creating

a series of committees in the Ministry of Defense and the armed services to review the records of military and civilian personnel associated with the ministry. Those who fit the criteria required for purging were dismissed from the services, and by February 1980 the deputy prime minister was claiming that some 6,000 persons had been purged and promising further dismissals. As President Bani-Sadr ruefully acknowledged after the Iraqi invasion, that promise was fulfilled. By that time a total of 12,000 people had been purged, 10,000 of them from the army.

Who the Purges Eliminated

The first purge had eliminated only the highest level of the military leadership, those service members considered most loyal to the shah, and those guilty of specific counterrevolutionary crimes. By contrast, the second purge concentrated on lower echelons, those who, while not guilty of serious crimes against the revolution, were suspect in their loyalties. This suspicion would have arisen as a result of previous association with Americans, training in the United States, relationships with those already purged, or other such factors. Since the warrant officers and military technicians were considered to have been a major revolutionary force in the final days of the revolution, and the conscripts generally were considered to have been victims of the shah's military policies, it can be surmised that the purge fell most heavily on the officer corps and, to a lesser extent, the cadre of noncommissioned officers.

The purge affected all the services, but its most serious effect was on the army, which lost 10,000 people; only 2,000 were removed from the navy, the air force, and civilian agencies. The navy, which had

Lt. Commander William F. Hickman was a 1981-82 federal executive fellow in Brookings' Foreign Policy Studies program. This article is drawn from his staff paper *Ravaged and Reborn: The Iranian Military*, 1982, published in January.



not been active in the shah's military government in the closing days of the revolution or involved in the government's response to the riots and street demonstrations, emerged from the revolution relatively unscathed. Likewise, the air force had a good revolutionary reputation because its members had opposed the military authorities in the closing days of the revolution. It was the army, therefore, which absorbed the bulk of the purge.

Within the army, the group most affected by the purge was the officer corps, undoubtedly because of its association with the shah and the American military. The officer corps was also held responsible for the deaths of many revolutionaries, and it is reasonable to assume that the vast majority of those eliminated were officers. For the purposes of analysis, a figure of 10 percent of those purged is allowed for the noncommissioned officers and other cadre.

The other 9,000 men removed represent some 23 percent of the army officer corps, but those officers most likely to have been targets were concentrated in the 14,000-plus field grades of major through colonel. If only 50 percent of those purged were from this group, the number would equal about one-third of the field-grade officers. Applying the more likely figure of 80 percent would mean the removal of over half such officers, with a devastating effect on the army's ability to conduct combat operations. The process, however, did allow the Islamic regime to establish political control over the shah's military.

With the outbreak of war with Iraq, the Islamic Republic was forced to proceed beyond the question of political control and to begin using the Iranian armed services as serious military instruments. The reconstitution of the army into an effective fighting force was accomplished in three distinct phases.

The first, during which the Iraqi forces were on the

offensive, lasted some seven weeks. For the military, this was a period of mobilization and deployment which was marked by ad hoc tactics and a total lack of coordination. Each of the services planned and conducted its own actions against the enemy, which resulted in a predictable lack of strategic success. Throughout this period, the Iranian army did not play a major role in the fighting. Individual regular units scattered throughout the region did play an important role on the tactical level, but because of the lack of command coordination these units did not work well with the Revolutionary Guards, and reports reached the West of bitter rivalries surfacing between units of regular troops and Guards. This unsatisfactory situation persisted through the initial phase of the war, resulting in indecisive strategy and inconclusive actions. That the Iranians on the ground were able to put up as effective a defense as they did despite the lack of coordination was due to the intangible components of Islamic fervor and Iranian nationalism.

A Tenacious Defense

For devout Muslims, to die while doing battle in the cause of Islam is martyrdom, which assures immediate entry into heaven. This belief sustained the Revolutionary Guards and other equally devout fighters on the front with Iraq and gave them the courage necessary to withstand repeated assaults and nearly incessant shelling. For the less devout, though, Islamic fervor could not provide the same spiritual sustenance. The desire to defend the Iranian homeland became the primary factor that enabled them to put up a tenacious defense against the Iraqi invaders. It is generally conceded that the passionate defense of the Iranians on the ground was a major factor in the Iraqis' decis-

ion to go on the defensive and fortify their positions.

During the initial phase, two major weaknesses of Iran's military became clear. The shortage of repair parts and military supplies imposed severe operational limitations, a problem which was to plague Iran throughout the war. Much more serious was battlefield ineffectiveness resulting from the lack of command coordination. Aside from the rivalries that had devel-



oped between the army and the Revolutionary Guards during the purges, the rancor and disharmony on the battlefield were a reflection of the political quarrels taking place in Tehran, where President Bani-Sadr, the leader of the minority secular forces of the government, was locked in a bitter struggle for power with Prime Minister Rajai and the clerical-dominated Islamic Republican Party.

The ideological struggle in Tehran dominated the second phase of the war. Although the struggle was manifested in a seven-month stalemate on the battlefield, significant changes took place during this period that improved the effectiveness of the military and moved it closer to the status of an Islamic institution. The army had been deployed to Khuzestan to assume responsibility for the fighting in the region, but there was little effort made to conduct coordinated operations with the Revolutionary Guards and local militia. Although they were co-located, the army and the Guards conducted virtually separate wars. Each had its own general staff, intelligence service, and public relations office.

A major concern on the part of the hardliners during the second phase was the close relationship that developed between the president and the military. Bani-Sadr spent much of his time on the front lines with the troops, and thereby inspired concern among the clerical establishment that he was isolating the army from the influence of the Islamic revolution.

To counteract this concern, the Supreme Defense

Council appointed permanent representatives to supervise the various fronts. The effect was to lessen the singular influence Bani-Sadr had over the military as commander-in-chief. In addition, the regime issued a series of statements supporting the armed services that emphasized the ties between them and the clerics. As the attacks escalated, Bani-Sadr's influence over the military was progressively eroded. Although he had been its most prominent secular proponent during the war, when Ayatollah Khomeini dismissed him the military did not rise to his defense, a clear indication of the influence the clerical regime had gained over the armed forces. By gaining such control, the regime laid the groundwork for the emergence of the military as an Islamic institution.

In addition to the shift in control of the military from secular to Islamic influence, a more subtle, but equally important, change occurred on the battlefield during this period. As had become clear during a futile Iranian offensive in January 1981, coordinated action by the military forces alone was not enough to defeat the Iraqis, and cooperation with the popular forces was a necessity. In the months following the offensive, the army and the Revolutionary Guards began to reach an uneasy accommodation. The first significant test of this new working relationship was a successful joint operation in late May to dislodge the Iraqi forces from the Allaho Akbar heights, to the west of Susangerd. This action established a pattern of cooperation that formed the basis for future operations.

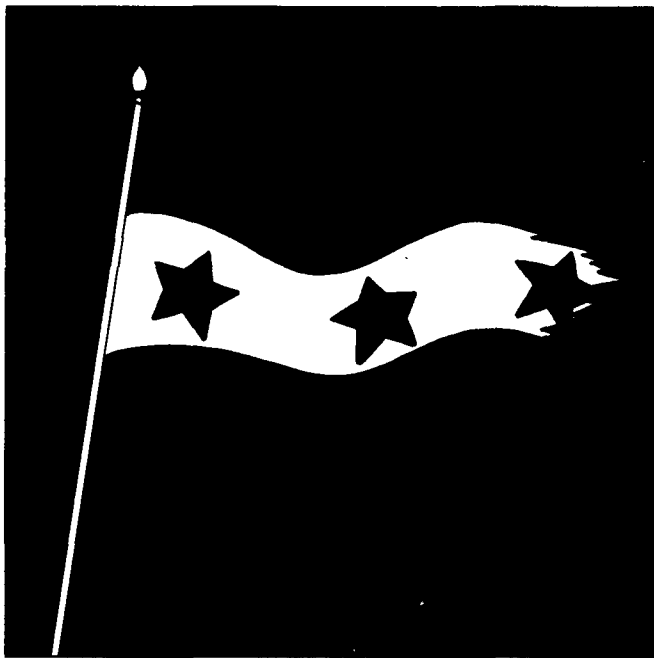
Once the ideological struggle in Tehran was concluded, the stalemate on the battlefield was resolved, and that became the third phase of the war. The military seized the operational initiative and emerged as an effective fighting force, scoring a series of victories that drove the Iraqis out of Iran. The major factors that allowed this final transformation were: (1) elimination of the conflicting guidance that had been sent to the military as a result of the power struggle; (2) resolution, however tenuous it may have been, of the bitter disputes between the army and the Revolutionary Guards, which resulted in increased cooperation and joint operations; and (3) improved tactics, intelligence, and planning on the part of the military.

The Siege of Abadan

The lifting of the siege of Abadan in late September 1981 demonstrated the working relationship that had been established between the army and the Guards. On September 27, the Iranians capitalized on intelligence which pinpointed weaknesses in the Iraqi defenses around Abadan, and in a surprise nighttime attack sent commando teams through the Iraqi lines to attack specific targets. They followed up with a direct attack, using both army and Revolutionary Guard units, augmented by popular forces of the Army of Twenty Million, which forced the Iraqis to retreat across

the Karun River, effectively lifting the siege of Abadan.

Buoyed by their success, the Iranians followed up in late November in the region surrounding Bostan, a small village northwest of Susangerd, near the Iraqi border. "Operation Jerusalem Way," as it was called by the Iranians, was a significant shift in tactics. Unable to obtain enough parts for their armored vehicles, they were forced to turn to an infantry strategy that relied



on the fervor of individuals to overcome staggering military odds. Faced with well-entrenched Iraqi troops protected by minefields, the Iranians sent forerunners, those willing to sacrifice themselves by blowing up mines with their bodies, through the minefields and followed up with human-wave assaults. Though expensive in human terms, the tactics were very effective. They demoralized the defending Iraqis, who could not respond effectively to waves of Iranians totally willing to die. The result was an Iranian victory that drove a wedge into the Iraqi lines and set up the succeeding operation in the spring of 1982.

When it started in late March, the Iranian offensive, code-named "Operation Undeniable Victory," was the largest and most complex Iranian effort in the war to that date. Amassing more than 100,000 regular troops, at least 30,000 Guards, and the same number of popular forces from the Army of Twenty Million, the Iranians launched a three-phase operation that broke the back of the Iraqi resistance in Khuzestan. In a combined arms operation that for the first time in the war made effective use of artillery, fighter-bomber aircraft, helicopters, and armor in support of massive infantry assaults, the Iranians decimated three full Iraqi armored and mechanized divisions, capturing between 15,000 and 20,000 men in a classic pincer movement.

With this action, the Iranian military demonstrated it had finally become a well-led, technically efficient fighting force. Maneuvering five divisions on the bat-

tlefield would not be a complicated operation for a modern army with a competent, well-trained leadership, but for Iran's army, which had been ravaged by the second purge, it was a major undertaking. That it performed as well as it did is indicative of the vast improvements that had taken place in planning, coordination, and execution.

Another indication of the qualitative advances that had occurred was the amount of time required for Iran to regroup its forces for the next assault. In the preceding operations, the Iranians required about two months to reassemble and concentrate enough force to launch another major offensive. After the Dezful operation, however, they required only one month. On April 30, in a replay of the previous battle, the Iranians initiated "Operation Holy City." Using surprise attacks, infantry and armor infiltration, human waves, and coordinated arms in support of tenacious regular and irregular forces, the Iranian military forced the Iraqis back across the border, ending the occupation of southern Iran.

A Shift in Attitudes

Western correspondents readmitted to Iran after these battles noted a shift in the attitude of the military. Where previously there had been open contempt by the professional soldiers for the Revolutionary Guards and other popular forces, in the spring of 1982 the soldiers tended to describe their actions in Islamic, rather than secular, terms. Since the ouster of Bani-Sadr, the military had been subjected to the tight control and continual influence of the clergy in their roles as advisers and representatives of the regime, without a corresponding influence from a secular force. In addition, the military officers chosen for command positions were young, ambitious, motivated, and dedicated to Islam. The combination of these two influences served to "Islamize" the war for the professional military, or at least to convince them that it was necessary to address it in Islamic terms. Add to this the fact that a large portion of the military, including warrant officers, technicians, conscripts, and even some officers, is sincerely committed to the Islamic goals of the regime, and the statements reflect a realistic assessment of the current political climate, both in the military and in Iran generally. The combination of tight control by the regime and "Islamizing" the war has created a new institution, the Islamic military.

Iran's success in expelling the invading Iraqis may have surprised the West, but in the Persian Gulf the response was much more basic. The specter of a reconstituted Iranian military controlled by a radical regime has generated major concern throughout the region. The important question, then, may not be how the Iranian military expelled the Iraqis, but rather what the Iranian leadership intends to do with it in the future.



Restructuring Industry Offshore: The U.S.-Mexico Connection

The benefits of shared production
have been questioned on both sides.
Yet this trade keeps growing.

Joseph Grunwald

THE SLOWDOWN in the world economy during the 1970s increased economic strain between the industrial and developing countries. The conventional wisdom of "what is good for industrial countries is good for developing countries" began to be challenged and demands for a "new international economic order" appeared in United Nations fora.

An important part of these tensions has derived from the emergence of export-led industrialization strategies in many developing nations, which have threatened some labor-intensive industries in developed-country markets. Because huge international disparities in wages have persisted, while costs of transport and communications have dropped, the price competitiveness of underdeveloped regions in the production of labor-intensive goods has increased. The industrial countries are no longer the most economic locations for the manufacture of many goods with production processes requiring important amounts of unskilled labor.

These tensions are unlikely to disappear in the foreseeable future, and the question arises as to whether the promotion of non-traditional exports from developing countries can be reconciled with the rising pressures to protect economic activities in the industrial countries.

Cooperation between the two sides in sharing the manufacture of products might provide a partial reconciliation by establishing a mutuality of interests. This type of internationalization of industry is based on the complementarities between the factors of production of developing and developed countries, whereby one side furnishes primarily labor services, the other primarily components.

This trade is neither a substitute for the traditional exchange of primary goods for manufactured products nor for the "non-traditional" exports emerging from newly industrializing countries and their imports of capital goods and technology. It is, rather, a new addition to the changing international division of labor.

A modern form of this trade is the interchange of parts that are fabricated or assembled in different countries. Such offshore assembly activities emerged

from growing worldwide competition in manufactures after World War II, as Western Europe recovered and Japan became a top industrial power. The United States faced the new competition first because of its relatively high wages. As labor-intensive production became increasingly uneconomic, U.S. firms turned offshore, breaking up production into stages and carrying out the labor-intensive processes in countries where wages were low. Items assembled abroad have become an important part of the American supply of certain manufactured products, especially in textiles and electronics. Imports of assembly output have reached a level of almost one-sixth of U.S. imports of manufactures, and about one-quarter of imports of manufactures from developing countries.

To understand better the nature of assembly activities abroad, I have examined the experience of Mexico in some detail. Mexico—not surprisingly—has become the United States' most important partner in offshore assembly activities. Many American entrepreneurs and business executives have been to Mexico, and for historical reasons as well as because of migration, its culture is diffused throughout many parts of the United States. It shares a nearly 2,000-mile border with one of the world's highest wage countries and by far the world's largest producer. The border is fairly accessible, and transportation from almost any point in the United States to the border is cheap when compared to overseas trade.

Proximity as a principal factor in Mexico's attractiveness was reinforced by Mexico's Border Industrialization Program, put into effect in the mid-1960s. Intended to absorb the border unemployment left by the termination of the "bracero" program between the U.S. and Mexico in 1964, it allowed duty-free imports of machinery, equipment, and components for processing or assembly within a 20-kilometer (12-mile) strip along the border, provided that all the imported products would be reexported.

Subsequent Mexican legislation, decrees, and administrative regulations expanded the scope of the "maquila," the Mexican name for assembly operations (the assembly plants are called "maquiladoras"). The

maquiladoras were exempted from the "Mexicanization" requirement of Mexican majority ownership, and the establishment of maquiladoras was permitted anywhere in the country. (The exception is the textile industry, whose exports are subject to the imposition of quotas by the United States. In that industry, assembly plants must have at least 51 percent Mexican ownership, the usual requirement for economic activities in Mexico.) Promotion of industrial parks has also been an attraction.

By the end of 1980, 620 maquiladoras employing about 124,000 persons were in operation. Most of the plants are located along the border with the United States and are among the most important employers in the border region. About 11 percent of the maquiladoras can be found in other areas of the country. Employment generation by offshore assembly production is significant, but within the context of Mexico's overall employment problem the maquila labor force is less than one percent of the total.



Maquila operations make a substantial contribution to Mexico's foreign exchange earnings. The precise magnitude is difficult to determine, primarily because part of the Mexican maquila wages have been spent across the border in the United States. Estimates of this leakage vary, with some sources giving the proportion as 50 percent or higher. In any case, available data indicate that in recent years offshore assembly operations have contributed to Mexican foreign exchange earnings more than the country's net tourism income and more than earnings from exports entering the United States under the Generalized System of Preferences, and also have constituted about half of total Mexican manufactured exports to the United States.

Mexico's assembly activities range from toys to sorting American retail store coupons to sophisticated electronic equipment. In 1980, television receivers and parts constituted well over one-quarter of Mexico's

maquila exports, textiles only 10 percent. Other major products fall into the electrical and electronic equipment category. In recent years, motor vehicle parts have also become important.

Mexico exported about \$2.5 billion of maquila output in 1980, \$2.3 billion of it to the United States. About half of this was value added (including material) in Mexico, the other half primarily U.S. components.

The majority of the maquila output is produced by American subsidiaries operating in Mexico. Mexican capital controls about one-third of the plants and participates in almost half of them. The Mexican participation is higher in the maquiladoras operating in the interior of the country. There is a small, but apparently increasing, European and especially Japanese presence in Mexico's assembly industry.

Capital requirements in assembly plants tend to be very low. The capital-to-labor ratio in maquiladoras seems to be less than one-third, and perhaps as little as one-ninth, of the ratio in the Mexican manufacturing industry as a whole. Although value added per worker in the maquiladoras is about two-thirds of the value added in other kinds of manufacturing, a unit of capital invested in assembly production generates at least twice the income as the average return in Mexico's industrial sector.

Wage levels in assembly plants are somewhat higher than the average for the economy. While one would expect wages to be higher at the border because of the proximity of high American income levels, even in the interior assembly wages appear to be at least ten percent above the national minimum wage average.

An important indicator of the linkage between offshore assembly and the Mexican economy is the share of Mexican materials used in the maquiladoras. This proportion has been consistently tiny, the average for all plants remaining well below 3 percent of total materials used. Only in the maquiladoras in the interior of the country have materials of Mexican origin reached 10 percent or more of the total.

A Mexican Critique

Because of the magnitude of Mexico's involvement in offshore assembly activities, its merits for the country have been debated extensively. The debate centers on three principal issues: (1) the absence of significant linkages of assembly activities to the Mexican economy; (2) the effects on the labor force and society; and (3) the vulnerability of maquiladoras to swings in the U.S. business cycle and their general dependency of decisions made outside of Mexico.

A persuasive argument can be made that assembly services constitute an enclave in the Mexican economy. Only a trivial percentage of materials used is of Mexican origin, employment generated tends not to absorb "traditional" unemployment and underemployment, and the bulk of the maquiladoras are concentrated in

towns along the U.S. border. Many towns are fairly isolated from the economic heartland of Mexico because of geography and an inadequate infrastructure. Jobs created are mainly unskilled and almost by definition, it is argued, will remain so. The labor force therefore receives little training. There is little transfer of the technology employed to the rest of the Mexican economy. Wages are destined to remain low, because of low skill requirements and in order to keep these activities attractive to foreign manufacturers. Lastly, only part of the wages paid to assembly workers near the border are spent to buy Mexican goods and services.

There is little doubt that this picture is close to reality as it has existed until now. It is open to question, however, whether the coproduction relationship between industrial and developing countries precludes the eventual integration of assembly production into the national economy. The experience of Korea, Taiwan, Hong Kong, and Singapore seems to point in the opposite direction.

Attempts have been made to increase the usage of Mexican components and materials in assembly operations. According to both Mexican and American managers, most of the attempts failed because of various deficiencies of potential Mexican suppliers: deficient quality control in meeting rigorous specifications, unmet delivery schedules, insufficient production capacity, and, mentioned most often, high prices for materials. In principle, these weaknesses can be overcome.

The other side of the coin is that there are no strong incentives for Mexican manufacturers to do business with maquiladoras or for Mexican capital to establish assembly operations. Given the protection of Mexican industry and the uncertainties of foreign markets, producing for secure domestic markets may yield higher returns and be easier than meeting the demanding requirements of foreign firms and consumers.

The enclave image is further fostered because the sale of maquiladora output on the domestic market is all but forbidden. However, maquiladoras could provide Mexican producers with sophisticated inputs at low cost, possibly assisting the technological development of the Mexican economy.

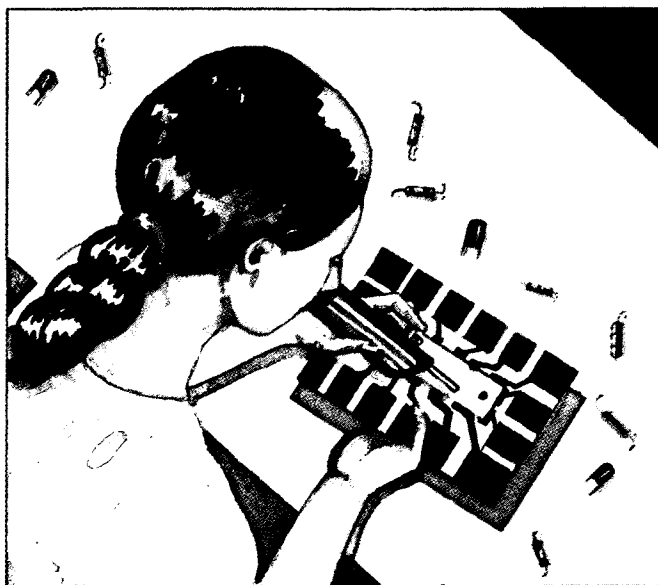
The striking aspect of the labor force in Mexican assembly industries is the high proportion of women—about three-quarters of the total. Some observers attribute this to managers who want a docile crew of production workers. Most of these women are very young and previously were not in the labor force.

Yet the preponderance of female workers in assembly production seems to be universal. The proportion in the United States is higher than in Mexico, approaching an average of 90 percent for most assembly activities.

While the assembly managers' assertion that women

are more dexterous than men for this kind of work sometimes serves as an excuse to obtain cheap labor, it may also be true that the employment of women in occupations such as sewing is culturally determined. It seems to be a small step from experience with the needle to the learning of electronics assembly, which requires detailed attention to small components. It may also be culturally determined that men are more impatient with delicate repetitive routines.

What seems clear is that maquila workers are not drawn from the traditionally unemployed or underemployed but from those who never worked or looked for work. Therefore, one of the original objectives of the Mexican border industrialization program, to absorb the rural male migrant workers left stranded by the termination of the "bracero" arrangement, has not been met.



Thus creation of assembly jobs in Mexico has done little to stem illegal migration to the United States, though there is little evidence that maquiladoras have stimulated a substantial migration from the interior of Mexico to the border or that they serve as jumping-off points for assembly workers to slip across the frontier.

The image of assembly production in Mexico is that of a service industry completely dependent on the vagaries of foreign demand and decisions in U.S. home offices. This perception was reinforced by a decline in maquila output during the U.S. recession of 1974–75. While the U.S. recession affected the electrical and electronics assemblers in parts of the border region, closer examination reveals that the fall in output and employment in other sectors and locations seems to be unrelated to the U.S. business cycle. Any effects of the U.S. recession were short-lived and probably no more severe in the assembly industry than in other sectors of the Mexican economy. By 1977 assembly employment was above the peak levels of 1974; by 1979 the number of plants operating had increased by almost 20 percent.

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The recession did serve to shake out the quick-profit-seeking, "fly-by-night" firms with small, easily portable investments. By the end of the decade there was a considerably higher proportion of well-established and larger U.S. companies operating in Mexico than during the early 1970s. Therefore one cannot assume that maquiladoras will be more prone to "pack up and go" whenever the business cycle goes down. During the 1980-82 recessions, there is some evidence that U.S. firms cut their high-cost assembly operations in the United States first before reducing their lower-cost offshore activities.

Although the industrial countries generally transfer offshore the lowest skilled operations, the evidence in Mexico seems to indicate that over time average skill levels have increased. First, the change in product mix of Mexico's assembly industries appears to reflect a rise in the technical sophistication of output. The relative importance of higher-technology industries, including automobiles, has grown. Second, positions for managers and assembly-line supervisors are increasingly filled by Mexicans. Third, as wages have risen in the assembly plants at the border, several firms have spun off unskilled operations into the interior where wages are lower, and have upgraded more skilled assembly processes at the border.

Nevertheless, the transfer of technology through offshore assembly will be limited in Mexico so long as the participation in the industry of Mexican capital and entrepreneurship is restricted. If maximizing the transfer of technology is an important policy objective, there must be greater incentives for Mexicans to operate maquiladoras, to supply inputs for them efficiently, and to use their output.

What the System Produces

The international restructuring of production is essentially a reactive strategy by industrial-country firms facing low-cost import competition. In an attempt to defend domestic markets rather than as an aggressive move against competitors at home, producers have transferred offshore production processes in which they have lost their international comparative advantage. It has been a relatively successful way for threatened firms to retain competitiveness and for developing countries to exploit their own comparative advantage.

Offshore assembly production therefore is a sharp manifestation of the North-South dichotomy: capital-intensive, high-technology production in industrial countries versus low-skill, labor-intensive production in developing countries. The system produces global benefits as well as serious misgivings. In the United States, the movement offshore creates adjustment problems for large pockets of unskilled laborers still remaining in manufacturing industry; in Mexico, the growth of assembly activities for exports raises the specter of a trap that will perpetuate a low-grade labor

force and rudimentary production activities. The Mexican perception is nurtured by the absence of strong linkages of assembly activities to the rest of the economy.

Therefore the benefits of offshore operations have been questioned by both sides. In the United States, the opposition comes from that segment of the labor force that is injured in competition with unskilled workers in the Third World. In Mexico, doubts have come from those concerned with the development of an indigenous industrial base and an independent industrial structure.

These dilemmas are difficult to resolve because the decisions depend on the evaluation of short-run versus long-run economic and social costs and benefits. As with many economic development questions, a definitive evaluation requires knowledge that exceeds the capacity of rigorous empirical research.

In a global scheme of a changing international division of labor, offshore production can be viewed either as an indefinite or as an intermediate stage. So long as sharp wage differentials between economically advanced and less developed regions persist, the rationale for offshore assembly will remain.

As Mexico becomes more technically advanced, its labor force more skilled, and its industries more efficient, it may be able to produce inexpensively high-quality components that had previously been imported from the United States. Mexico could thus produce the entire product both for its own market as well as for export. The offshore assembly stage might provide time for the United States to make needed adjustments and move resources into activities where an international comparative advantage could be achieved. It could afford Mexico the opportunity to invest in new production activities, build linkages, and gain access to new technologies by permitting the operation of more advanced foreign firms on its soil.

Even in a post-offshore assembly stage, production sharing activities might continue as they now exist among industrial countries. Coproduction then would be based less on wage differentials than on specialization, consumer preferences, and institutional factors such as safety and environmental standards.

The movement toward automation might work against offshore assembly operations. It would take, however, an enormous improvement in the efficiency of automation to offset the economies derived from the vast, inexpensive, and easily trainable labor pool of Mexico.

The question is whether Mexico can directly participate in productivity growth through automation. If the movement toward U.S. automation is accelerated because of high-risk conditions in Mexico, assembly production will be brought back to the United States. But when automation becomes economically viable in the natural course of cost-minimization efforts, automated assembly may well be carried on in Mexico, so long as wage differentials persist and are not outweighed by the perception of greater risk. B

Oil: Ensuring a Saudi Flow

Saudi Arabia's oil power stems from its ability to vary production levels from a low of five or six million barrels a day to a high of ten million barrels. The greatest threat to Saudi oil production will not come from decisions within Saudi Arabia, says Brookings Senior Fellow William Quandt, but from the threat of war and instability in the Middle East. He urges the United States to decrease the likelihood of any of these threats by developing an effective U.S. strategy for the region. Without such a strategy, Quandt believes, there is substantial risk that sometime in the 1980s the flow of Saudi oil will be disrupted by events beyond the control of Saudi leaders.

In most circumstances, the Saudis will produce oil at a level consistent with U.S. interests, because that is also in their self-interest, Quandt says in *Saudi Arabia's Oil Policy*. By and large, the Saudis have set production levels that meet the world demand for oil. Two important exceptions occurred in 1973 and 1979, when the Saudis contributed to sharp increases in oil prices by limiting their supply. In the intervening periods, the Saudis used their significant production capacity to bring about a slow decline in real prices.

Saudi Arabia's Oil Policy, by William B. Quandt, senior fellow, Foreign Policy Studies program. November 1982. 46 pages. \$5.95 paper.

In this study, Quandt examines the ways Saudi Arabia has used its oil power in the recent past, analyzes the motives behind Saudi oil policy, and looks ahead at the prospects for the future. He concludes by presenting guidelines for U.S. policy in the Middle East which he believes would lead to the uninterrupted flow of Saudi oil in the decade ahead.

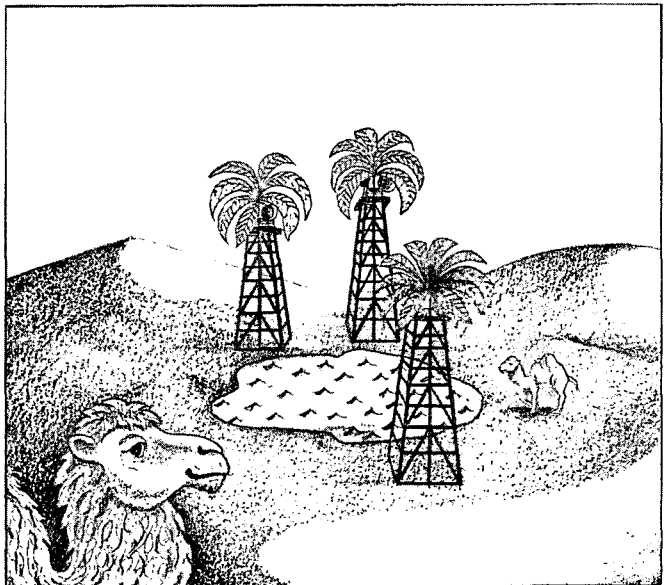
Quandt paints a picture of a country that has not generally used oil as a weapon to extract profits or political payoffs from the industrialized countries dependent on Middle Eastern oil. Saudi plans for development and security place some constraints on production policy, but the most significant pressures have been external developments in the Middle East. The October 1973 oil embargo against the West and the Saudi-led decision of most Arab oil states to lower production occurred in the highly charged political atmosphere created by the Arab-Israeli war. Similarly, in 1979, the Iranian revolution set the stage for the second price shock, which the Saudis initially tried to prevent but then aggravated by their decision to cut production to 8.5 million barrels. Once again, political considerations played a part in the Saudi calculus. The Saudi production ceiling was welcomed by the Iranians, by those Saudis critical of "overproduction," and by those interested in an expression of Saudi displea-

sure with the Egyptian-Israeli treaty and the subsequent American-led campaign against Saudi Arabia and its opposition to the treaty. Quandt contends that continued high production would have exposed the Saudis to the charge of being excessively subservient to the United States.

The experience from 1978 to 1982 reveals that the Saudis were not always in a position to control prices. Sometimes they misread the market, and at times they underproduced or overproduced. They operated in an environment of uncertainty, and their month-to-month output suggests a pragmatic trial-and-error approach to decision making. Indeed, the Saudi position of moderation on oil prices has twice corresponded to the start of a new American administration that in each instance was considering major Saudi arms requests.

The current Saudi budget for 1982-83 represents no real increase over 1981-82, suggesting the Saudis have begun to adjust development and security planning to the new realities of reduced oil income. They will be able to support current programs with a production level as low as 6.5 million barrels a day selling at \$34 a barrel, before they need to draw heavily on their financial reserves. Pressures on the budget are more likely to come in the form of demands by other Middle East countries for financial support, particularly from Iraq, Syria, and Egypt.

Oil installations are vulnerable targets, and there will always be concern about accidents, regional conflicts, or internal instability. Saudi oil facilities are within easy reach of such conceivable adversaries as Iran, Iraq, or Israel. Internally, it is plausible to consider a breakdown in royal family consensus and an in-



creased role of the military in politics. Some analysts now say that declining oil revenues can produce social upheaval. Indeed, Quandt believes Saudi leaders show a concern for this prospect, and that they will be careful not to reduce those programs that have a direct bearing on the welfare of the average Saudi citizen.

Most important, Quandt believes, is a U.S. policy that attempts to reduce the external threats and pressures on the Saudis. Containing the Iranian revolution and contributing to a resolution of the Palestinian problem would go a long way to alleviate worries about Saudi oil production during the 1980s.

Oil: Reestablishing Iranian Markets

Iran must accomplish three major tasks before it can successfully increase its oil production and reestablish secure markets, according to Shaul Bakhash in a new Brookings study on oil policy in post-revolution Iran.

To raise production and regain markets, says Bakhash, Iran must first repair relations with its traditional oil customers and reestablish a reputation as a reliable supplier. It must also "reach some understanding on prices, production levels, and market shares" with its OPEC partners. Finally, Iran must bring the conflict with Iraq to an end, he says.

In *The Politics of Oil and Revolution in Iran*, Bakhash, visiting professor in the Department of Near Eastern Studies at Princeton University and consultant to the Brookings Energy and National Security Research program, examines the ideological, political, regional, and economic factors of Iran's oil strategy since 1979.

Iranian production fell from 5.5 million barrels a day in 1978 to 1.2 million barrels a day in late 1981, and leveled off at 2.2 million barrels a day in the summer of 1982. Iranian authorities began marketing oil aggressively then in an attempt to recoup a large share of the international market, substantially undercutting OPEC prices and exceeding the production ceiling set by the cartel by a million barrels a day.

Iranian policies on pricing, production, and dealings with international major oil companies were relatively moderate immediately after the fall of the Shah in January 1979, according to Bakhash, but became more extreme as the result of ideological considerations, internal factional struggles, and radical influences in the government. The revolutionary leaders believed that oil had been used as an instrument for the exploitation and domination of Iran and other oil-producing and developing countries by the industrial powers. They abrogated the agreement under which the international majors purchased the bulk of Iranian oil, reduced foreign involvement in the oil industry, withdrew from joint ventures outside Iran, and sold small amounts of oil to more than 50 customers on short-term contracts.

Bakhash's analysis shows how these developments gave Iran a reputation as an unreliable supplier and disrupted its relations with large customers. In addition, he shows, a deliberate lowering of production levels in 1979 and 1980 caused exports to drop to 700,000 barrels a day, from an earlier level of several million a day, by the start of the Iran-Iraq war.

Iran must also work more closely with its OPEC partners, Bakhash says. Iranian representatives pursued an aggressive pricing policy in OPEC in 1979 and 1980, arguing for higher prices and production limitations to sustain high prices, then raising its own prices above the OPEC ceiling and lowering production in an attempt to influence the market.

In 1982, Iran cut prices unilaterally, offered large discounts under the table and on the spot market, ignored an OPEC production-quota plan to prevent price declines, and argued that Saudi Arabia should cut production so that Iran could have a larger market share. Bakhash adds that the possibility of concluding an agreement with OPEC members, while not out of reach, is hampered by continuing friction between Iran and Saudi Arabia and by the Iran-Iraq war.

Iran's third task is to bring the war with Iraq to an end, Bakhash says. The war has been costly: 60 to 65 percent of refinery capacity has been knocked out, pipelines and gas production facilities have been destroyed, and a large petrochemical complex has been damaged. Although Iran has succeeded in raising exports to their present level, Bakhash says, the war could disrupt its oil-exporting capacity at any time.

***The Politics of Oil and Revolution in Iran*, by Shaul Bakhash. December 1982. 37 pages, \$5.95 paper.**

Bakhash says that Iran "has made oil policy a hostage to ideological considerations and internal political rivalries" for nearly three years. As a result of this and the war with Iran, by early 1982 its foreign exchange reserves were nearly exhausted. The government faces a pressing need to repair the war-shattered economy, he says, and to meet public demand for housing and social services. In "a revival of pragmatism," Iran's new official position is to use oil revenues to finance the reconstruction of the economy and the confrontation with domestic and foreign enemies.

"In the near future," Bakhash concludes, "Iranian production levels appear likely to be determined primarily by immediate economic requirements." But, he says, "the conditions that had contributed to volatile and erratic oil policies in the recent past" have not been eliminated and the successful pursuit of Iran's goals is not guaranteed.

Threats and Responses

A study of Soviet strategic rocket forces has led two Brookings scholars to conclude that the Soviet Union is likely to respond to U.S. nuclear weapons programs if arms control agreements cannot be reached.

Robert P. Berman and John C. Baker review the development of Soviet strategic weapons in their study, *Soviet Strategic Forces: Requirements and Responses*, and analyze the military requirements that apparently inspired the Soviet programs. The study is the first comprehensive analysis of the development of Soviet strategic forces: it reconstructs the buildup of strategic missile programs and covers strategic bombers, air and space defenses, and satellite systems. Berman and Baker were research associates in Brookings' Foreign Policy Studies program when they did their analysis.

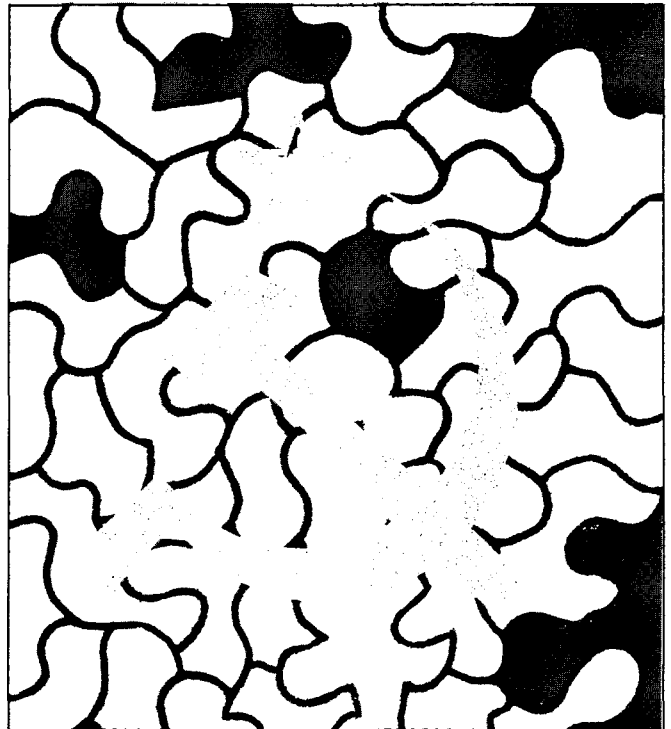
In the study, the authors argue that currently deployed Soviet weapons emerged from planning decisions made in the early 1960s, and that new weapons that will become available for deployment are a result of programs initiated in the late 1960s and early 1970s. Unless some form of arms control is achieved, according to Berman and Baker, it is likely that developments in the Western threat to Russia in the 1980s—as it is perceived by the Soviet Union—will generate new weapons programs to meet Soviet military requirements as they have been historically defined in Moscow.

The authors stress that Soviet requirements for strategic forces are determined as much by regional threats as by those in the United States. These strategic forces are intended to counter Western means of launching nuclear strikes. Through the 1950s the direct threat to the Soviets was from American bombers and missiles based on the periphery of the Eurasian land mass. The Soviet response was to counter them with medium-range bombers and missiles.

Soviet Strategic Forces: Requirements and Responses, by Robert P. Berman and John C. Baker. December 1982. 171 pages. \$8.95 paper.

The priority on regional systems was switched abruptly in the early 1960s in response to the Kennedy administration's rapid buildup of U.S. intercontinental strategic forces, which presented the Soviets with a qualitatively new threat and changed their ICBM targeting requirements. They could no longer rely on a relatively small number of area-devastation weapons to destroy a large number of "soft" targets (military or economic targets unprotected against nuclear blasts) in the United States and moved to direct targeting of Minuteman silos. It was this response that shaped their ICBM programs and caused so much concern in the West when the Soviets began to deploy missiles in the latter half of the 1970s.

As an interim response to the Kennedy initiatives the Soviets adapted two missile programs, then in mid-development. The SS-9 combined sufficient payload and accuracy to allow its use against Minuteman launch-control centers as an alternative to attacking the silos themselves. And the SS-11, a variable-range missile originally intended as a regional system, had its range increased to allow its use as an ICBM. It was not accurate enough to be considered an anti-silo



weapon, but its small size allowed a high production rate for use as a political "balancer" to the Minuteman force. It was not until the SS-18 and SS-19 ICBMs were deployed in the mid-to-late 1970s that the Soviets could claim an effective counter-silo capability.

The high priority given to intercontinental requirements created regional neglect. The failure of the SS-14 and SS-15 replacements in the early 1970s meant that regional forces continued to make do with the highly vulnerable SS-4 and SS-5 systems until it was possible to deploy the SS-20. The inadequacy of the SS-13 solid-fueled ICBM in the mid-1960s appears to have prompted a decision to put part of the national strategic reserve at sea, with the Delta/SS-N-8 submarine system as an interim measure and the Typhoon/SS-N-20 as the full response. The authors describe the persistent but usually lagging attempts to respond to rapidly evolving targeting requirements, efforts that have been marked by adaptation and interim solutions and plagued by a significant number of failures. Soviet programs are usually mission-determined and technologically constrained, unlike American programs, in

which technological opportunities tend to prompt weapons development.

Berman and Baker describe a process of incremental improvement of Soviet missile forces, without the leaps in technological sophistication that characterize U.S. developments and worry Soviet military planners. To the extent there has been any rapid buildup of missiles, it took place between 1968 and 1972, when the Soviets deployed 1,050 ICBM/SLBM launchers, matching the U.S. deployment of 1,060 ICBM/SLBM launchers from 1962 to 1967 in numbers, but with greatly inferior missiles.

The authors reconstruct the design and development of Soviet missile programs and identify the evolution of Soviet targeting requirements. They show how the Soviets saw their needs and why they made the decisions they did. They also show how, until recently, Soviet strategic capabilities have fallen short of their requirements, and highlight the importance of regional targets. For example, at the time of SALT I, although the Soviets nominally had more ICBMs than the United States, about 300 of the SS-11s were not available for use against the United States because they were needed to cover targets in Europe and China, to compensate for the deficiencies of the SS-4 and SS-5 regional systems.

This intercontinental shortfall underlines how sensitive the Soviets are to threats from surrounding regions. The shorter warning time makes these systems appear more threatening than those based in the United States. Therefore the Soviets view the American dis-

inction between "strategic" and "theater" or "intermediate" nuclear forces as meaningless or deliberately misleading.

The Soviets reevaluated their strategic force posture in the early 1960s in response to American initiatives. Berman and Baker say that it is these requirements, adjusted to reflect the provisions of SALT, that have shaped the missile systems now "waiting in the wings." The authors say the Soviets will revise their strategic force requirements in the early 1980s as they respond to major changes in the threat environment. These threats are: the MX and Trident II; the development of two new types of penetrating bombers; the deployment of large numbers of air- and sea-launched cruise missiles; and the emplacement in Europe of ground-launched cruise missiles and Pershing II IRBMs. The Pershing II is capable of hitting targets within the Soviet Union in less than ten minutes. These systems represent for the most part new additions to existing U.S. capabilities rather than replacements for obsolescent weapons. China, France, and Britain are also planning to upgrade significantly their existing offensive nuclear capability.

The authors conclude that the Soviet Union will respond to these threats unless there is some major advance in arms control, although how they will respond is unclear. Berman and Baker argue that if the United States is to make wise long-term decisions concerning strategic balance it must acquire a thorough understanding of the process of evolution of Soviet strategic forces and the implications for U.S. security.

The Use of Scientific Evidence in Public Health Regulation

Government agencies that regulate public health often fail to review available scientific evidence systematically before making decisions, according to the authors of *Quantitative Risk Assessment in Regulation*, and even minor improvements in techniques used to assess health risks could improve regulatory decision making.

A more systematic approach would make better use of scientific data and quantified knowledge and lead to better decisions, the authors of the study say. One result would be the prevention of costly delays caused by successful legal challenges. The study was edited by Lester B. Lave, a senior fellow in the Brookings Economic Studies program at the time it was written and currently professor of economics at Carnegie-Mellon University in Pittsburgh. Lave also contributed two chapters to the book and co-authored a third.

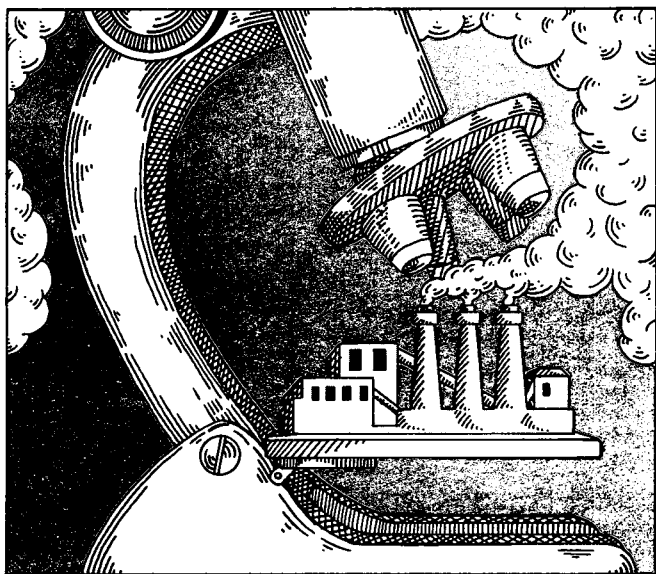
Quantitative Risk Assessment in Regulation focuses on hazard identification and risk assessment in six case

studies: an Environmental Protection Agency (EPA) revision of a standard for ozone, the setting of a standard for benzene exposure by the Occupational Safety and Health Administration (OSHA), OSHA regulation of coke oven emissions, EPA regulation of ionizing radiation, and two other studies dealing with the regulation of the pesticide chlorobenzilate and of food additives. The case studies were originally presented at a May 1981 conference sponsored by the Brookings Institution, the American Petroleum Institute, and Carnegie-Mellon University.

The five authors describe the current methods and uncertainties of quantitative risk assessment in the six case studies. They show that risks cannot be assessed by mechanical procedures and that uncertainties will often dominate the results.

In his introduction to the book, Lave argues that a careful review of scientific evidence and a quantitative assessment of risk should be the basis of regulatory

decisions. Regulation without these elements is uninformed, arbitrary, and unlikely to withstand litigation, induce cooperation from those being regulated, or produce the results desired. Scientific analysis has not been emphasized in most rulemaking, he says, but it is possible to demonstrate that society's health and safety goals can be reconciled with a healthy industrial economy by making greater use of scientific data and analysis.



The regulatory decisions discussed by the authors are complex: each involves areas where measurement is difficult, theory is incomplete, and judgment is required for answering many of the scientific questions. And determining the health effects from exposure to a new chemical is complicated by the types of problems that might arise, including cancer, acute or chronic disease, genetic change, and birth defects. Conducting an assessment for any given substance properly requires knowing five things, Lave says: the health effects from exposure, the dose-response relationship, the population at risk, the distribution of doses of the toxic substance, and exposure to and the effects of confounding substances.

In a separate chapter, Lave delineates methods of risk assessment and discusses ways of improving regulatory decisions. Some of the central concerns of the four major studies are presented here.

Christopher H. Marraro, a staff attorney for the American Petroleum Institute, reviews the EPA's decision to revise national ambient air quality standards for ozone in 1979. EPA procedures were inadequately planned and carried out clumsily, Marraro says. One criticism is that although the EPA is required to review standards every five years, the agency supported little research between the original setting of the ozone standard in 1971 and the review in the late 1970s. Proper research could have remedied many of the inadequacies of existing scientific literature, Marraro says.

A second criticism is that the EPA attempted to choose an ozone level that was politically viable and then demanded that the risk assessment be used to support that level. The problem was further complicated when the EPA relied on a questionable process of subjective probability analysis in which a small number of experts were asked to give opinions. In addition, some other executive agencies made major attempts to influence the EPA at the end of the decision making process. Marraro recommends that more careful, coherent planning be followed and that final regulatory decisions be made by EPA officials charged with making policy.

Thomas M. Bartman, a clerk for three judges in a Virginia U.S. District Court, relates the difficulties OSHA encountered when it attempted to issue a standard for regulating benzene in the workplace. The standard was set aside after three years of court battles. The OSHA case demonstrates the problems encountered when neither dramatic epidemiological evidence nor risk assessment is used as the basis for making a decision.

Dwight D. Briggs, an engineer with Schlumberger, Ltd., and Lester Lave examine the controversy and uncertainty in regulating coke oven emissions. Also subjected to challenges and judicial review, a 1977 standard issued by OSHA is criticized on both scientific and regulatory decision levels. Briggs and Lave also look at EPA methods of assessing the health effects of coke oven emissions on workers and the general population.

***Quantitative Risk Assessment in Regulation.* Lester B. Lave, editor. January 1983. 258 pp. \$10.95 paper. \$26.95 cloth.**

Ronald J. Marnicio, a graduate student in Carnegie-Mellon's Department of Engineering and Public Policy, reviews another case, the regulation of ionizing radiation by the EPA, in which regulatory goals were set arbitrarily even though an exhaustive accumulation of detailed information was available for decision making. The EPA model gives the most complete analysis of potential risks now available, Marnicio says, and its approach appears to have produced a serviceable set of standards. But there are disturbing questions about whether or not the decision making procedures provided the public with optimal protection.

The volume concludes with two brief studies by Bartman and Marraro.

Bartman praises the EPA's risk assessment of chlorobenzilate. Its analysis, he says, carefully explored the issues and the risks and benefits. He believes the assessment is an exemplary regulatory response to a toxic pesticide, and recommends it as a model for other EPA programs as well as for other federal agencies regulating risk.

Marraro, in a review of the difficulties faced by the

Food and Drug Administration (FDA) in regulating food additives and contaminants, compares several schemes developed to regulate three different classes of carcinogenic substance. Noting Congress's refusal

to delegate fundamental regulatory policy decisions and basic value judgments, he discusses several legislative reform options and recommends that the FDA consider the benefits and merits of risk assessment.

Political Spillover From the Abortion Dispute

On the tenth anniversary of the Supreme Court's historic decision in *Roe v. Wade* legalizing abortion, the Brookings Institution has published an appraisal of the effects of the fight over abortion policy on the American system of government.

According to *The Abortion Dispute and the American System*, edited by Gilbert Y. Steiner, a social policy expert who is a senior fellow in Brookings' Governmental Studies program, pro-choice and pro-life objectives have each been pursued within widely accepted boundaries of American political behavior. The conclusion is based on original analyses of the constitutional context of the dispute and of its effects on Congress, executive appointments, and elections. These analyses were written by distinguished scholars having no history of involvement in the abortion dispute.

In the first of the volume's four essays, Lawrence M. Friedman, Marion Rice Kirkwood Professor of Law at Stanford University, argues that the reasoning, technique, and results of *Roe v. Wade* are not out of line with the constitutional doctrines and judicial practices of our epoch. Though the decision was one "of a very select club of Supreme Court decisions that sent shock waves through the country," it rested on a base of prior law and protected a widely acknowledged "right of privacy" by giving women the right to choose abortion in the first trimester of pregnancy. Nor, in Friedman's view, would a constitutional amendment overturning the decision be illegitimate or an unwarranted "cluttering" of the Constitution. Because the Court read abortion into the Constitution, the Constitution has inescapably become a battleground.

***The Abortion Dispute and the American System*, edited by Gilbert Y. Steiner, senior fellow, Governmental Studies program. January 1983. 103 pages. \$6.95 paper.**

Roger Davidson, a political scientist and author of several books on Congress who is a senior specialist at the Congressional Research Service, argues that "legislative processes have not done justice to the gravity and complexity of abortion as a public policy problem," but finds no evidence that passionate conviction has jeopardized orderly procedure in Congress.

Professor G. Calvin Mackenzie of Colby College, a political scientist, finds in an essay on executive appointments that no nominee for office has failed to be

confirmed because of a stance on abortion, even though nominees' views on the subject have been an issue in several cases.

Professor John Jackson, a political scientist, and Maris Vinovskis, a historian, both of the University of Michigan, assess the effect of abortion on opinion and elections. Because well-organized groups on each side of the dispute have a single, overriding purpose and are unwilling to compromise, abortion is a good test of the effect of "single-issue" interest groups on the



political system. Jackson and Vinovskis conclude that over the long run single-issue interests tend to be moderated and absorbed into broader coalitions because of pressures created by single-member legislative districts, winner-take-all elections, and the presence of many rival interests in society. "For any particular policy interests to become effective in such a system" they write, "they must eventually form coalitions with other interests in support of specific candidates and political organizations."

In September 1982 partisans on each side of the abortion controversy joined governmental affairs experts in a day-long symposium at Brookings to assess the conclusions of the papers. In summarizing the symposium, Steiner reports that the disputants appeared to agree that while abortion continues to be perhaps the most controverted social question in the United States, "the fight over abortion policy has not yet proved destructive or intolerably costly to governmental institutions."

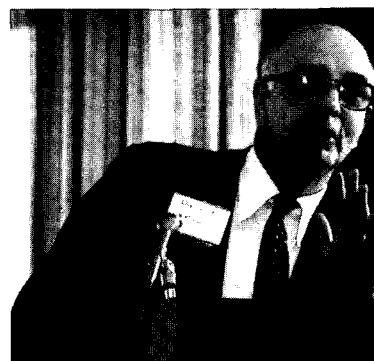
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Seminar for New Members of Congress

Every two years for the past decade, the Brookings Institution has organized a public policy seminar for newly elected members of Congress. This year the seminar was conducted in collaboration with the American Enterprise Institute for Public Policy Research and the Congressional Research Service of the Library of Congress and supported by the Henry Luce Foundation. Gathering in historic Colonial Williamsburg, Virginia, January 7-

11, 32 new members of the 98th Congress participated in a series of lectures, panel discussions, and small workshops to examine major policy issues confronting the nation. Among the topics discussed with government officials and scholars were the economic outlook, the future of federal entitlement programs, and national security requirements. Following are scenes from various activities during the four-day period.

Brookings Today



Chairman of the Board of Governors of the Federal Reserve System Paul A. Volcker talks about monetary policy issues.

Brookings President Bruce MacLaury welcomes new members of Congress and their spouses to the seminar. Seated behind him are the moderator, Warren I. Cikins of Brookings, Gilbert Gude, director of the Congressional Research Service, and William J. Baroody, Jr., president of the American Enterprise Institute (AEI).



Brookings Senior Fellow Barry Bosworth addresses the plenary session on the outlook for the economy.





Congressional Budget Office Director Alice M. Rivlin speaks to new members about the federal budget and congressional policy choices. On the left is moderator Cikins, on the right Rudolph G. Penner, resident scholar and director of Fiscal Policy Studies at AEI.

Photography by Jerry David.
 Art by David Street and Renee Gettier Street.
 Book Cover on page 30 by Neil McKnight.

Congressman Herbert Bateman (R., Va.), on left, greets Senator Jeff Bingaman (D., N.M.) at a reception at Carter's Grove Plantation.



New members review tax policy options in a workshop session.

New members pose for a group photo during reception.



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